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Volume VII

ICAM INTEGRATED PLANNING SYSTEM (IPS)

Volume VII — Project Specification - Data Base

General Electric Company
Production Resources Consulting
One River Road
Schenectady, New York 12345

November 1984

Final Report for Period 26 September 1980 — 31 May 1984

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30 November 1984

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This technical report has been reviewed and is approved for publication.

R Douglas Eubanks
ICAM Project Manager

28 May 1985
Date

For The Commander:

N G Tupper
NATHAN G. TUPPER
Chief
Computer Integrated Mfg Branch

29 May 85
Date

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19. ABSTRACT *(Continue on reverse if necessary and identify by block number)*

This product specification documents the as-built detailed design of computer database software for the IPS prototype Production Planning and Control System. This is Volume VII of the final Technical Report.

→ to p. 1

The Final Report consists of seven volumes as follows:

Volume I: Project Overview
Volume II: Product Specification - Factory Loading
Volume III: Product Specification - Record and Provide Production Information
Volume IV: Product Specification - Release Production Requirements
Volume V: Product Specification - Resultant Processing
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PREFACE

This final report covers the work performed under Air Force Contract F33615-80-C-5141. This contract is sponsored by the Materials Laboratory, Air Force Systems Command, Wright-Patterson Air Force Base, Ohio. It was administered under the technical direction of Mr. Nathan Tupper, ICAM Program Manager, Manufacturing Technology Division, through the Project Manager, Lieut. Douglas Eubanks. The General Electric project manager was Mr. Ralph Navarretta of Production Management & Systems Consulting.

The subcontractors and their contributing activities were:

Subcontractors	Role
Northrop	Prepare model for factory view
General Dynamics	Prepare model for factory view
Rockwell International	Prepare model for factory view
Illinois Institute of Technology Research Institute (IITRI)	Develop viewpoint of small and medium-size aerospace manufacturers and to build shallow factory models
SofTech	Provide consulting to the coalition on $IDEF_0$ (function) modeling
D. Appleton Co.	Provide consulting to the coalition on $IDEF_1$ (data) modeling
Pritsker and Associates	Provide consulting to the coalition on $IDEF_2$ (dynamic) modeling and act as a simulation advisor
Systems & Applied Sciences	Review requirements and preliminary designs
General Electric Corporate Research and Development	Provide simulation tasks
Control Data Corporation	Provide information systems requirements
Virginia Polytechnic Institute (VPI)	Provide state-of-the-art review and technology survey

NOTE: Note that the number and date in the upper right corner of each page of this document indicate that the volume has been prepared according to the ICAM Configuration Management (CM) Life Cycle Documentation requirements for a Configuration Item (CI).

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APPENDIX J PP&CS DATA-BASE SUBSCHEMA TOTSUBBL LISTING

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Section 1

GENERAL

1.1 PURPOSE

The purpose of this report is two-fold. First, this report documents the logical characteristics of an integrated data base implemented in support of the Production Planning And Control System (PP&CS). This data base is to be implemented on a VAX 11/780 computer system making use of the VAX-11 DBMS CODASYL – compliant data base management system. The primary and most appropriate vehicle for describing logical data base characteristics is the data base schema for PP&CS. A schema diagram is included in this specification as Appendix A. A schema listing is included as Appendix B. The PP&CS schema is the basis for defining user views of the data, i.e., subschemas, which are incorporated within application programs for accessing PP&CS data. The eight subschemas developed for this project are included as Appendices D thru J.

The second purpose of this document is to include a physical description of the PP&CS data base. Physical characteristics include sizes of data base areas, records within areas, and physical placement of records within the data base.

Section 2

DOCUMENTS

2.1 REFERENCE DOCUMENTS

The following is a list of applicable documents relating to this data base specification:

	DOCUMENTS	DOCUMENT NO.
CI-06	Perform Factory Loading	DS 550152061
C1-07	Release Production Requirements	DS 550153071
C1-08	Record and Provide Production Information	DS 550154081
C1-09	Perform Resultant Processing	DS 550155091
CI-11	Interfaces	DS 550156111
• VAX-11	DBMS Database Administration Manual	AA-J966A-TEM
• VAX-11	DBMS Utilities Reference Manual	AA-J962A-TEM
• VAX-11	DBMS DDL Reference Manual	AA-J961A-TEM

Section 3

DATA BASE IDENTIFICATION AND DESCRIPTION

3.1 DATA BASE IDENTIFICATION

This document describes logical and physical characteristics of an integrated data base implemented to support PP&CS functional requirements. The name of the schema for this data base is "TOTPPCS."

3.1.1 System Using the Data Base

The PP&CS data base will be implemented on a VAX 11/780 computer system configured as part of the ICAM Integrated Support System (IISS) testbed network (project priority 6201M). This data base will be implemented via VAX-11 DBMS data base software. Logical and physical data base characteristics are respectively defined under the VAX-11 DBMS facility with the use of a Data Definition Language (DDL) and a Data Storage Definition Language (DSDL). Data stored within the PP&CS data base is accessed via a Data Manipulation Language (DML) compatible with CODASYL recommendations. The DDL, DSDL and DML are fully described in Digital Equipment Corporation publications listed in Section 2.1.

3.1.2 Storage Requirements

This data base was designed and developed to accommodate the requirements of the Design Specifications (DS) listed in Section 2.1. The Development Specification (DS) for configuration item 6, "Perform Factory Loading," indicates that the PP&CS data base in a production environment must accommodate 100,000 planned orders (a.k.a. production requirements) each associated with an average of eight operations. There are three record types in the "FACLOAD" area of the data base designed to support production requirments. The first, "PRODUCTION-REQUIREMENT," requires approximately 122 bytes of secondary storage for each production requirement record. The second, "LOAD-UNIT," requires approximately 180 bytes for each production requirement assuming that each production requirement specifies only one part to be produced. The third, "LOAD-UNIT-SEQMENT," is required to consolidate similiar operation requirements and requires approximately 30 bytes for each operation. The total secondary storage requirement for the above three record types is therefore given as follows:

RECORD TYPE	RECORDS		BYTES		
PRODUCTION_REQUIREMENT	100,000	×	122	=	12.2 M BYTES
LOAD_UNIT (LU)	300,000	×	180	=	54.0 M BYTES
LOAD_UNIT_SEGMENT	40,000	×	30	=	1.2 M BYTES
			Total		67.4 M BYTES

Other records that are included in the "FACLOAD" area of the data base include PRODUCTION-REQUIREMENT-CHANGE-REQUEST, MOVE-TIME, MOVE-HISTORY, MOVE-SAMPLE, LU-STATE, LU-STATE-RELATION, and LOAD-UNIT-ACTUAL-PERFORMANCE. These records will require approximately 100.0 M BYTES of storage in a production environment. An approximate total of 167.4 M BYTES of storage will be required for the "FACLOAD" area of the data base.

A similar analysis can be performed relative to parts information and process planning information stored within the PP&CS data base. The System Design Specification for this effort identifies the requirement that the PP&CS data base accomodate 100,000 part records and associated process planning information. Based on this requirement, it is possible to deduce the following secondary storage estimates for process planning information:

RECORD TYPE	RECORDS		BYTES		
PART	100,000	×	70	=	7.0 M BYTES
PLANNED_ROUTING (PR)	100,000	×	88	=	8.8 M BYTES
ROUTING_OPERATION	800,000	×	72	=	57.6 M BYTES
ALTERNATE_OPERATION	2,000	×	401	=	.4 M BYTES
CONTIGENCY_OPERATION	2,000	×	401	=	.4 M BYTES
			Total		74.2 M BYTES

Other records that consititute process planning information include PART-HISTORY, PART-HISTORY-SAMPLE, ROUTING-OPERATION-HISTORY, and ROUTING-OPERATION-HISTORY-SAMPLE. These records will require approximately 120 M BYTES of storage to accommodate a production environment. The "PROPLAN1" and "PROPLAN2" areas of the data base that support the total process planning requirement will require approximately 194.2 M BYTES of storage.

The "CONFIG" area of the data base contains the following record types: LEVEL, RESOURCE, LOWER-LEVEL-RESOURCE, RESOURCE-PLANNING-PERIOD, PR-STATE, PR-STATE-RELATIONSHIP, MACHINE-TYPE, RESOURCE-MACHINE-TYPE, MACHINE-INSTANCE, CAPACITY-INTERVAL, PLANNING-PERIOD, M-DAY, GLOBAL-PARAMETER, TRANSACTION, PRIOR-TRANSACTION, ACTIVITY, and SUB-PROCESSACTIVITY. This area will require approximately 3 M BYTES of storage to accommodate a production environment.

The "FLARRAY" area established to accommodate the RESOURCE-MACHINE-TYPE-LOAD-PROFILE will require approximately .2 M BYTES of storage. The "MIPPAREA" area established to accommodate the MACHINE-INSTANCE-PLANNING-PERIOD record will require approximately 1.3 M BYTES of storage.

The "LTFLOAD" area contains the following record types: LT-RES-MACH-TYPE-LOAD-PROFILE, LT-RESOURCE-MACHINE-TYPE, RMT-PLANNING-PERIOD, LT-PRODUCTION-REQUIREMENT, TEMP-LT-LU, LT-LOAD-UNIT, and LT-LOAD-UNIT-SEGMENT. Based on the storage requirements of the "FACLOD" area requirements, this area could require approximately 100 M BYTES of storage.

A summary of the approximate area storage requirements is given below:

DATA BASE AREA	BYTES
CONFIG	3.0
PROPLAN1 and PROPLAN2	194.2
FACLOAD	167.4
FLARRAY	.2
MIPPAREA	1.3
LTFLOAD	100.0
Total	466.1 M BYTES

3.2 LABELING/TAGGING CONVENTIONS

Naming conventions were applied to the specification of unique identifiers for data-base record types, data items and set types. In general, identifiers for record types, data items and set types are respectively named from entity classes, attribute classes and relation classes identified in the PP&CS information model.

For example, the PRODUCTION REQUIREMENT entity class gives rise to the PRODUCTION-REQUIREMENT record type. Data item names however are further qualified by prefixing an abbreviation of the record type of the data item to the corresponding attribute class abbreviation. For example, the ORDER NUMBER attribute class is a data item in two data-base record types. In the PRODUCTION-REQUIREMENT record it is abbreviated PR-ORD-NUM. In the LOAD-UNIT record it is abbreviated LU-ORD-NUM.

3.3 ORGANIZATION OF THE DATA BASE

In order to accommodate the requirements of the DS's, and facilitate data base efficiencies, the data base is organized into seven areas. The "CONFIG" area contains records that are applicable to DS 550154081, "Record and Provide Production Information." Areas "PROPLAN1" and "PROPLAN2" are developed to accommodate process planning and part information. The "FACLOAD" area is established to accommodate the information requirements of DS 550152061, "Perform Factory Loading." The "LTFLOAD" area is also designed to accommodate the same DS relative to requirements for "long term" loading functions. The "FLARRAY" area and "MIPPAREA" area are configured to provide for more efficient access to the data base.

3.4 SPECIAL INSTRUCTIONS

Special user instructions for generating the data base, translating the schema or subschemas, performing backup/recovery operations, etc. will be documented separately as part of the PP&CS user's manual.

3.5 DATA-BASE SUPPORT SOFTWARE

Data-base utilities and support software for maintaining any VAX-11 DBMS data base are described in the VAX-11 DBMS Utilities Reference Manual listed in Section 2.1.

Section 4

DATA DEFINITION

4.1 LOGICAL DEFINITION

The logical structure of the PP&CS data base is illustrated in the schema diagram Appendix A. The following subschemas are provided to facilitate access to the data base:

FUNCTION	SUBSCHEMA
FACTORY LOADING	TOTSUB_FL
RECORD & PROVIDE	TOTSUB_RC
PROCESS PLANNING	TOTSUB_PP
RESULTANT PROCESSING	TOTSUB_RP
DATA PREPARATION	TOTSUB_DP
LONG-TERM LOADING	TOTSUB_LT
LONG-TERM BALANCING	TOTSUB_BL

4.2 RECORDS AND ENTRIES

The records and entries (data items) in the data base are listed as part of the data-base schema listing in Appendix B. A brief description of each record is provided. All data items contained in a given record are described relative to their physical characteristics.

4.3 PHYSICAL DEFINITION

As previously noted, physical characteristics of a VAX-11 DBMS data base are defined using the Data Storage Definition Language (DSDL) for developing what is referred to as a "storage schema" which is shown in Appendix C.

In particular, the DSDL can be used to specify the physical placement within the data base of records defined in the schema. For example, a data-base administrator may specify that a record type defined in the schema be evenly "scattered," i.e., distributed among data-base pages using a hashing algorithm based on the value of one or more data items defined within the record type. Alternatively, the occurrences of a record type may be stored physically close to, i.e., clustered about, an owner record of another record type. The DSDL may also be used for specifying certain physical characteristics of set types.

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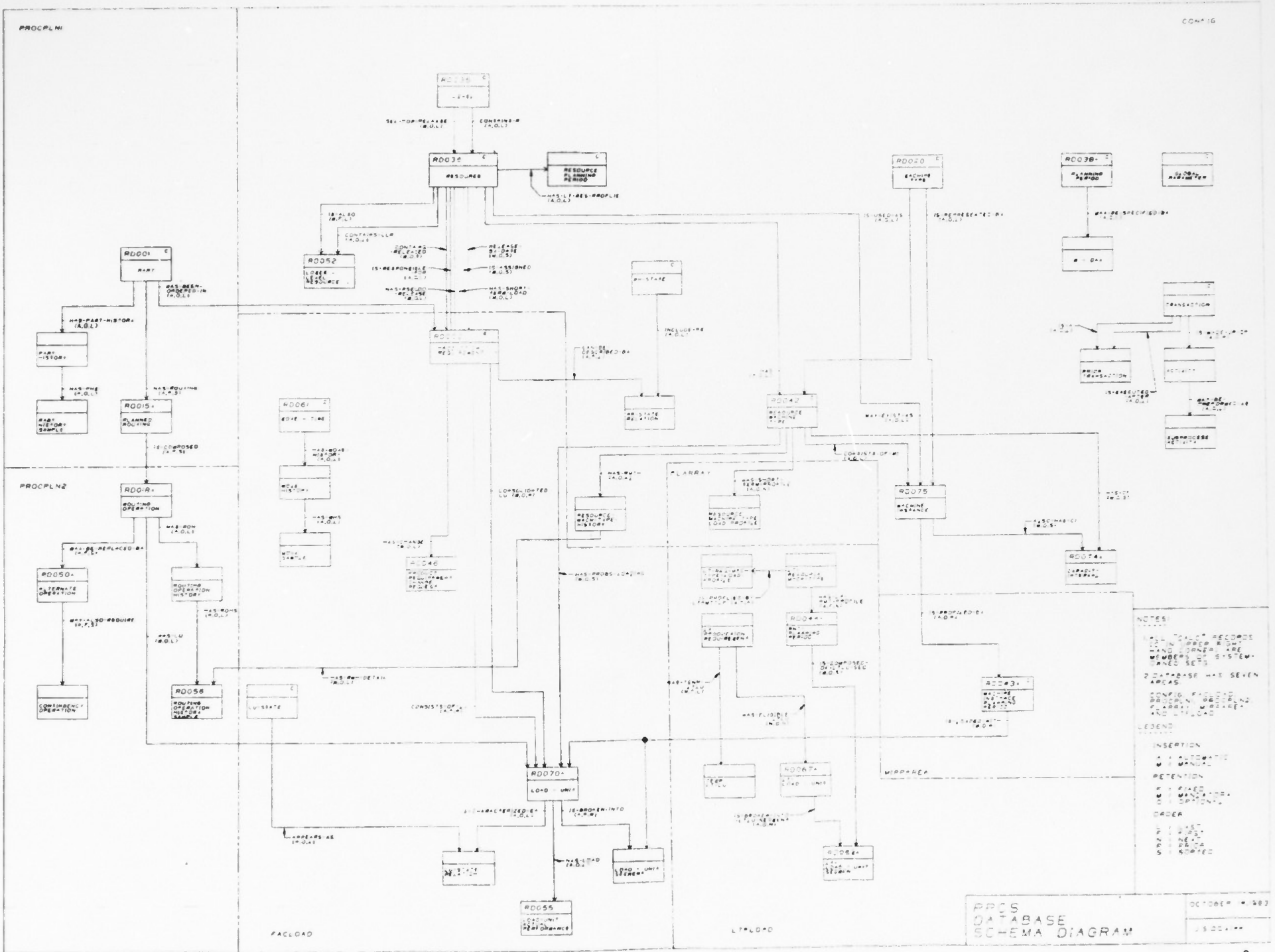
APPENDIX A

PPCS DATA-BASE SCHEMA DIAGRAM


PROCPLN1
PROCPLN2
FACLOAD
LTPLOAD
RD001
PART
RD015A
PLANNED ROUTING
RD018A
ROUTING OPERATION
RD050A
ALTERNATE OPERATION
CONTINGENCY OPERATION
RD056
ROUTING OPERATION HISTORY
RD052
RD061
RD036
RESOURCE
RD020
RD038A
RD042
RD075
RD074A
RD070A
LOAD UNIT
RD055
LOAD UNIT PERFORMANCE
RD043A
RD067A
RD044A
RD046
NOTES:
LEGEND
INSERTION
RETENTION
ORDER
PRCS
DATABASE
SCHEMA DIAGRAM

APPENDIX B

PP&CS DATA-BASE SCHEMA LISTING

```
*****************************************************************************
*              THIS LISTING DATE IS MARCH 12, 1984                          *
*****************************************************************************

*****************************************************************************
*  This schema is developed to support all PP&CS modules required to        *
*       demonstration the functionality as defined in the Design            *
*       Specifications (DS) listed below:                                   *
*  CI-06  "Perform Factory Loading"                      DS 550152061       *
*  CI-07  "Release Production Requirements"              DS 550153071       *
*  CI-08  "Record and Provide Production Information"    DS 550154081       *
*  CI-09  "Perform Resultant Processing"                 DS 550155091       *
*  CI-11  "Interfaces"                                   OS 550156111       *
*****************************************************************************
SCHEMA NAME IS TOTPPCS
*****************************************************************************
*  The following user views or subschemas have been defined to              *
*  support the specified functionality.                                     *
*          FACTORY LOADING                TOTSUB_FL                         *
*          RECORO & PROVIDE               TOTSUB_RC                         *
*          PROCESS PLANNING               TOTSUB_PP                         *
*          RESULTANT PROCESSING           TOTSUB_RP                         *
*          DATA PREPARATION               TOTSUB_DP                         *
*          LONG-TERM LOADING              TOTSUB_LT                         *
*          LONG-TERM BALANCING            TOTSUB_BL                         *
*****************************************************************************

*****************************************************************************
*  Seven areas are defined to accommodate functional processing             *
*       requirements.  PRPLAN01 will be accessed the Process                *
*       Planning module and contains the following records: MISS_ROUT,      *
*       PART, PLANNED_ROUTING, and PART_HISTORICAL_PERFORMANCE.             *
*       A second area PRLPLAN02 is provided to facilitate a more even       *
*       distribution of processing planning related records.  This          *
*       area contains the following records: ROUTING_OPERATION,             *
*       ALTERNATE_OPERATION, CONTINGENCY_OPERATION, and                     *
*       ROUTING_OPERATION_CALC_PERF.                                        *
*****************************************************************************
AREA NAME IS PROCPLN1
AREA NAME IS PROCPLN2
*****************************************************************************
*       FACLOAD will be uitilized by modules within "Perform Factory        *
*       Loading", "Perform Resultant Processing", "Release Production       *
*       Requirements", and "Record and Provide Production Information".     *
*       Records in this area include TRANSACTIONS, MOVE_TIME,               *
*       MOVE_TIME_HISTORY, OPERATION_COMPLETE, PRODUCTION_REQUIREMENT,      *
*       PRODUCTION_REQUIREMENT_CHANGE, LOAO_UNIT, LOAD_UNIT_SEGMENT,       *
*       PRODUCTION_REQUIREMENT_OPERATION, LOAO_UNIT_ACTUAL_PERFORMANCE.     *
*****************************************************************************
```

```
*****************************************************************************
AREA NAME IS FACLOAD
*****************************************************************************
*       The records in the CONFIG represent the factory configuration       *
*       and will be maintained by the modules within "Record and            *
*       Provide Production Information".  Modules within all of the         *
*       other CI's will access these records.  They are LEVEL,              *
*       RESOURCE, LOWER_LEVEL_RESOURCE, PR_OWNER, MACHINE_TYPE,             *
*       RESOURCE_MACHINE_TYPE, RESOURCE_PERFORMANCE, MACHINE_INSTANCE,      *
*       RESOURCE_MACH_TYPE_HIST_PERF, CAPACITY_INTERVAL,                    *
*       PLANNING_PERIOD, M_DAY, and GLOBAL_PARAMETER.                       *
*****************************************************************************
AREA NAME IS CONFIG
*****************************************************************************
*                                                                           *
*       FLARRAY will be accessed by the Factory Loading module during       *
*       the actual loading process to identify planning periods that        *
*       have excess capacity. It contains the                               *
*       RESOURCE_MACHINE_TYPE_LOAD PROFILE record.                          *
*****************************************************************************
AREA NAME IS FLARRAY
*****************************************************************************
*       MIPPAREA is provided to contain the planning period data            *
*       as defined in the MACHINE_INSTANCE_PLANNING_PERIOD record.          *
*****************************************************************************
AREA NAME IS MIPPAREA
*****************************************************************************
*       The LTFLOAD area is provide to accommodate the large volume         *
*       of records required for the Long Term Loading/Balancing modules     *
*       within "Perform Factory Loading".  It contains the following        *
*       records:  RESOURCE_MACH_TYPE_PLAN_PERIOD, LT_LOAD_UNIT, and         *
*       LT_LOAD_UNIT_SEGMENT.                                               *
*****************************************************************************
AREA NAME IS LTFLOAD
*****************************************************************************
*       The LTTEMP area is provided to accommodate requirements for         *
*       a temporary work area for long term loading processing.             *
*****************************************************************************
AREA NAME IS LTTEMP
*****************************************************************************
*                                RECORDS                                    *
*                                                                           *
*                                                                           *
*  The following is a list of all records contained in the schema.          *
*       LEVEL                                                               *
*       RESOURCE                                                            *
*       RESOURCE_PLANNING_PERIOD                                            *
*       LOWER_LEVEL_RESOURCE                                                *
*       MACHINE_TYPE                                                        *
*       RESOURCE_MACHINE_TYPE                                               *
*       MACHINE_INSTANCE                                                    *
*       PART                                                                *
*       PLANNED_ROUTING                                                     *
*       ROUTING_OPERATION                                                   *
*       ALTERNATE_ROUTING                                                   *
*       CONTINGENCY_ROUTING                                                 *
*       PRODUCTION_REQUIREMENT                                              *
```

```
*       RESOURCE_MACH_TYPE_LOAD_PROFILE                                *
*       MACH_INSTANCE_PLANNING_PERIOD                                  *
*       LOAD_UNIT                                                      *
*       LOAD_UNIT_SEGMENT                                              *
*       TRANSACTION                                                    *
*       PRIOR_TRANSACTION                                              *
*       ACTIVITY                                                       *
*       SUBPROCESS_ACTIVITY                                            *
*       MOVE_TIME                                                      *
*       PLANNING_PERIOD                                                *
*       M_DAY                                                          *
*       GLOBAL_PARAMETER                                               *
*       PART_HISTORY                                                   *
*       PART_HISTORY-SAMPLE                                            *
*       ROUTING_OPERATION_HISTORY                                      *
*       ROUTING_OPERATION_HISTORY_SAMPL                                *
*       RESOURCE_MACH_TYPE_HISTORY                                     *
*       PRODUCTION_REQUIREMENT_CHANGE                                  *
*       LOAD_UNIT_ACTUAL_PERFORMANCE                                   *
*       RMT_PLANNING_PERIOD                                            *
*       LT_LOAD_UNIT                                                   *
*       LT_LOAD_UNIT_SEGMENT                                           *
*       LT_RES_MACH_TYPE_LOAD_PROFILE                                  *
*       LT_PRODUCTION_REQUIREMENT                                      *
*       LT_RESOURCE_MACHINE_TYPE                                       *
*       CAPACITY_INTERVAL                                              *
*       MOVE_HISTORY                                                   *
*       MOVE_HISTORY_SAMPLE                                            *
*       LU_STATE                                                       *
*       LU_STATE_RELATION                                              *
*       PR_STATE                                                       *
*       PR_STATE_RELATION                                              *
*       TEMP_LTLU                                                      *
*****************************************************************************
*****************************************************************************
*  The LEVEL record contains information identifying the level          *
*  structure with the targeted implementation  organization and         *
*  includes a designation of "department" level to which work will be   *
*  released.                                                    RD035   *
*****************************************************************************
RECORD NAME IS LEVEL
  WITHIN CONFIG
       ITEM L_LEV_NUM TYPE IS CHARACTER 2
       ITEM L_LEV_ID TYPE IS CHARACTER 8
       ITEM L_LEV_DPT_CD TYPE IS CHARACTER 8
       ITEM L_LEV_DESC TYPE IS CHARACTER 24
*****************************************************************************
*  The RESOURCE record contains information identifying the resource    *
*  and the upper and lower load limits associated with that resource.   *
*  Additionally, information is maintained concerning current load,     *
*  dispatched load, released load and load to be released.  Total       *
*  accumulated work, resource load unit hours and actual release        *
*  quantity is maintained.  Actual run time, planned hours and actual   *
*  clock time is maintained.  Resource effectiveness, efficiency,       *
*  total utilization, total capacity, and capacity utilization are      *
*  also maintained.  Setup information including actual and standard    *
*  times are maintained.  Resource efficiency is calculated.  Actual    *
*  and planned loss are included as well as a loss rate.        RD036   *
*****************************************************************************
```

```
*****************************************************************************
RECORD NAME IS RESOURCE
  WITHIN CONFIG
       ITEM R_RES_ID TYPE CHARACTER 8
       ITEM R_LEV_ID TYPE IS CHARACTER 8
       ITEM R_LEV_DPT_CD TYPE IS CHARACTER 8
       ITEM R_REL_LOAD_LOWER_LIM TYPE IS PACKED DECIMAL 8
       ITEM R_REL_LOAD TYPE IS PACKED DECIMAL 10 -2
       ITEM R_REL_LOAD_UP_LIM TYPE IS PACKED DECIMAL 8
       ITEM R_INWORK_DATE_REL_INT TYPE IS PACKED DECIMAL 8
       ITEM R_AUTO_REL_IND TYPE IS CHARACTER 1
       ITEM R_TOT_ACCUM_WORK TYPE IS PACKED DECIMAL 10 -2
       ITEM R_RES_LOAD_UNIT_HOURS TYPE IS PACKED DECIMAL 10 -2
       ITEM R_DISP_LOAD TYPE IS PACKED DECIMAL 10 -2
       ITEM R_CURRENT_LOAD TYPE IS PACKED DECIMAL 10 -2
       ITEM R_WORK_TO_BE_RELEASED TYPE IS PACKED DECIMAL 8
       ITEM R_ACT_REL_QTY TYPE IS PACKED DECIMAL 10 -2
       ITEM R_RES_DESC TYPE IS CHARACTER 16
       ITEM R_PROD_RATE_TRACKING_SIG TYPE IS CHARACTER 1
*        ITEM R_RES_TOT_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
*        ITEM R_RES_TOT_PLANNED_HOURS TYPE IS PACKED DECIMAL 10 -2
*        ITEM R_RES_TOT_ACT_CLOCK_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM R_RES_EFFEC TYPE IS PACKED DECIMAL 2
       ITEM R_RES_EFFIC TYPE IS PACKED DECIMAL 2
*        ITEM R_RES_TOT_UTIL TYPE IS PACKED DECIMAL 10 -2
*        ITEM R_RES_TOT_CAP TYPE IS PACKED DECIMAL 10 -2
       ITEM R_RES_CAP_UTIL TYPE IS PACKED DECIMAL 2
*        ITEM R_RES_TOT_ACT_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
*        ITEM R_RES_TOT_STD_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM R_RES_SETUP_EFFIC TYPE IS PACKED DECIMAL 2
*        ITEM R_RES_TOT_ACT_SETUP_LOSS TYPE PACKED DECIMAL 8
*        ITEM R_RES_TOT_PLAN_SETUP_LOSS TYPE IS PACKED DECIMAL 8
       ITEM R_RES_TOT_SETUP_LOSS_RATE TYPE IS PACKED DECIMAL 2
       ITEM R_LEV_NUM TYPE IS CHARACTER 2
       ITEM R_OVERLOADED_PD_FLAG TYPE IS CHARACTER 1
*****************************************************************************
*  The LOWER_LEVEL_RESOURCE record is provided to accommodate the          *
*  many-to-many record relationship.                                RD052  *
*****************************************************************************
RECORD NAME IS LOWER_LEVEL_RESOURCE
  WITHIN CONFIG
       ITEM LLR_RES_ID TYPE IS CHARACTER 8
       ITEM LLR_LL_RES_ID TYPE IS CHARACTER 8
*****************************************************************************
*  The RESOURCE_PLANNING_PERIOD record is provided to show                 *
*  summarized load versus capacity for varying levels of resource.         *
*                                                                   RDnnn  *
*****************************************************************************
RECORD NAME IS RESOURCE_PLANNING_PERIOD
  WITHIN CONFIG
       ITEM RPP_RESOURCE_ID TYPE IS CHARACTER 8
       ITEM RPP_PLN_PERIOD_ID TYPE IS CHARACTER 10
* The above items are GROUPED as RPP_CALC_KEY in the subschemas
       ITEM RPP_TOTAL_CAPACITY_HRS TYPE IS PACKED DECIMAL 8 -2
       ITEM RPP_TOTAL_LOAD_HRS TYPE IS PACKED DECIMAL 8 -2
       ITEM RPP_CUM_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2
       ITEM RPP_CUM_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
*****************************************************************************
```

```
*****************************************************************************
*  The MACHINE_TYPE record is provided to identify the machine types      *
*  within the implementation factory environment.                  RD020  *
*****************************************************************************
RECORD NAME IS MACHINE_TYPE
  WITHIN CONFIG
       ITEM MT_MACH_TYPE TYPE IS CHARACTER 8
       ITEM MT_MACH_TYPE_DESC TYPE IS CHARACTER 16
*****************************************************************************
*  The RESOURCE_MACHINE_TYPE record contains identification and           *
*  and performance information about the machines of a given type         *
*  within a specified resource.  Information maintained includes queue    *
*  time, effectiveness rate, efficiency, run time data, planned hours     *
*  data, setup time data, machine type utilization data, machine type     *
*  capacity data, associated clock time, and machine type effectiveness   *
*                                                                  RD042  *
*****************************************************************************
RECORD NAME IS RESOURCE_MACHINE_TYPE
  WITHIN CONFIG
       ITEM RMT_RES_ID TYPE IS CHARACTER 8
       ITEM RMT_MACH_TYPE TYPE IS CHARACTER 8
* The above items are GROUPed as RMT_CALC_KEY in the subschemas
       ITEM RMT_Q_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM RMT_EFFECT_RATE TYPE IS PACKED DECIMAL 6 -2
       ITEM RMT_Q_TIME_VAL_LIM TYPE IS PACKED DECIMAL 6 -2
       ITEM RMT_EFFIC TYPE IS PACKED DECIMAL 6 -2
       ITEM RMT_NUM_MACHINES TYPE IS PACKED DECIMAL 3
       ITEM RMT_Q_TIME_COMP_FACTOR TYPE IS PACKED DECIMAL 6 -2
       ITEM RMT_RATIO_RUN_SETUP TYPE IS PACKED DECIMAL 6 -2
*        ITEM RMT_TOT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
*        ITEM RMT_AVG_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
*        ITEM RMT_TOT_MACH_TYPE_PLND_HRS TYPE IS PACKED DECIMAL 10 -2
*        ITEM RMT_AVG_MACH_TYPE_PLND_HRS TYPE IS PACKED DECIMAL 10 -2
       ITEM RMT_AVG_MACH_TYPE_EFFIC TYPE IS PACKED DECIMAL 2
*        ITEM RMT_TOT_ACT_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
*        ITEM RMT_AVG_ACT_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
*        ITEM RMT_TOTAL_STD_SETUP_HOURS TYPE IS PACKED DECIMAL 10 -2
*        ITEM RMT_AVG_STD_SETUP_HOURS TYPE IS PACKED DECIMAL 10 -2
*        ITEM RMT_TOT_STD_SETUP_LOSS TYPE IS PACKED DECIMAL 8
       ITEM RMT_AVG_SETUP_EFFECT TYPE IS PACKED DECIMAL 2
*        ITEM RMT_TOT_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 8
*        ITEM RMT_AVG_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 4 -2
*        ITEM RMT_AVG_STD_SETUP_LOSS TYPE IS PACKED DECIMAL 4 -2
       ITEM RMT_AVG_SETUP_LOSS_RATE TYPE IS PACKED DECIMAL 2
*        ITEM RMT_TOT_MACH_TYPE_UTIL TYPE IS PACKED DECIMAL 2
*        ITEM RMT_AVG_MACH_TYPE_UTIL TYPE IS PACKED DECIMAL 2
*        ITEM RMT_TOT_MACH_TYPE_CAP TYPE IS PACKED DECIMAL 10 -2
*        ITEM RMT_AVG_MACH_TYP_CAP TYPE IS PACKED DECIMAL 10 -2
*        ITEM RMT_AVG_CAP_UTIL_RATIO TYPE IS PACKED DECIMAL 4 -2
*        ITEM RMT_TOT_CLOCK_TIME TYPE IS PACKED DECIMAL 10 -2
*        ITEM RMT_AVG_CLOCK_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM RMT_AVG_MACH_TYPE_EFFEC TYPE IS PACKED DECIMAL 2
       ITEM RMT_RUN_TIME_VAL_LIM TYPE IS PACKED DECIMAL 8
       ITEM RMT_SETUP_TIME_VAL_LIM TYPE IS PACKED DECIMAL 8
       ITEM RMT_RES_UTIL_VAL_LIM TYPE IS PACKED DECIMAL 8
*****************************************************************************
```

```
*****************************************************************************
*  The MACHINE_INSTANCE record identifies a unique machine within          *
*  a specified resource.                                          RD075    *
*****************************************************************************
RECORD NAME IS MACHINE_INSTANCE
  WITHIN CONFIG
       ITEM MI_MACH_SER_NUM TYPE IS CHARACTER 8
       ITEM MI_MACH_RES_ID TYPE IS CHARACTER 8
       ITEM MI_MACH_TYPE TYPE IS CHARACTER 8
*****************************************************************************
*  The PART record contains the part number and description of all         *
*  part numbers called out on production requirements.            RD001    *
*****************************************************************************
RECORD NAME IS PART
  WITHIN PROCPLN1
    ITEM P_PART_NUM TYPE CHARACTER 24
    ITEM P_PART_DESC TYPE CHARACTER 32
       ITEM P_OVER_UNDER_QTY TYPE IS PACKED DECIMAL 8
*        ITEM P_TOT_PLANNED_ORD_QTY TYPE IS PACKED DECIMAL 8
*        ITEM P_AVG_PLANNED_ORD_QTY TYPE IS PACKED DECIMAL 8
*        ITEM P_TOT_ACT_QTY_COMPL TYPE IS PACKED DECIMAL 8
*        ITEM P_AVG_ACT_QTY_COMPL TYPE IS PACKED DECIMAL 8
*        ITEM P_TOT_PLND_QTY_VAR TYPE IS PACKED DECIMAL 8
*        ITEM P_AVG_PERC_COMP TYPE IS PACKED DECIMAL 2
*        ITEM P_AVG_DELIV_VAR TYPE IS PACKED DECIMAL 8
*        ITEM P_TOT_LOAD_HRS_PART TYPE IS PACKED DECIMAL 6 -2
*        ITEM P_AVG_LOAD_HRS_PART TYPE IS PACKED DECIMAL 6 -2
*        ITEM P_TOT_TIME_REP_PART TYPE IS PACKED DECIMAL 10 -2
*        ITEM P_AVG_TIME_REP_PART TYPE IS PACKED DECIMAL 6 -2
*        ITEM P_AVG_TIME_VAR_PART TYPE IS PACKED DECIMAL 6 -2
*        ITEM P_TOT_PLANNED_SCRAP_PART TYPE IS PACKED DECIMAL 8
*        ITEM P_AVG_PLANNED_SCRAP_PART TYPE IS PACKED DECIMAL 8
*        ITEM P_TOT_ACT_SCRAP_PART TYPE IS PACKED DECIMAL 8
*        ITEM P_AVG_ACT_SCRAP_PART TYPE IS PACKED DECIMAL 8
*        ITEM P_AVG_SCRAP_VAR_PART TYPE IS PACKED DECIMAL 8
       ITEM P_PRIME_RESP TYPE IS CHARACTER 8
       ITEM P_SCRAP_VAR_PART TYPE IS PACKED DECIMAL 8
*****************************************************************************
*  The PLANNED_ROUTING record contains the routing information which is    *
*  standard information.                                          RD015*   *
*****************************************************************************
RECORD NAME IS PLANNED_ROUTING
  WITHIN PROCPLN1
    ITEM PL_ROUTING_NUM TYPE IS UNSIGNED NUMERIC 2
    ITEM PL_EFFECTIVITY_DATE TYPE IS CHARACTER 10
    ITEM PL_REVISION_DATE TYPE IS CHARACTER 10
    ITEM PL_REVISION_NUM TYPE IS UNSIGNED NUMERIC 4
    ITEM PL_RAW_MATL_ITEM_ID TYPE IS CHARACTER 24
    ITEM PL_RAW_MATL_DESC TYPE IS CHARACTER 32
    ITEM PL_RAW_MATL_QTY_PER TYPE IS UNSIGNED NUMERIC 2
    ITEM PL_RESP_DEPT TYPE IS CHARACTER 8
    ITEM PL_ORIGIN_LOCATION TYPE IS CHARACTER 8
*****************************************************************************
*  The ROUTING_OPERATION record contains operation-specific information    *
*                                                                 RD014*   *
*****************************************************************************
```

```
*************************************************************************
RECORD NAME IS ROUTING_OPERATION
  WITHIN PRDCPLN2
    ITEM RD_OPER_NUM TYPE IS UNSIGNED NUMERIC 4
    ITEM RO_OPER_DESC TYPE IS CHARACTER 15
    ITEM RO_DEPT TYPE IS CHARACTER 8
    ITEM RO_MACH_TYPE TYPE IS CHARACTER 8
    ITEM RO_STD_SETUP_HOURS TYPE IS PACKED DECIMAL 8 -3
    ITEM RD_STD_HOURS_PER_OPER TYPE IS PACKED DECIMAL 8 -3
    ITEM RO_PER_CODE TYPE IS UNSIGNED NUMERIC 1
    ITEM RO_REQED_TOOL_KIT_ID TYPE IS CHARACTER 8
    ITEM RO_NUM_TOOL_KITS_AVAIL TYPE IS UNSIGNED NUMERIC 2
    ITEM RO_SKILL_REQMT TYPE IS CHARACTER 8
    ITEM RO_SKILL_DESC TYPE IS CHARACTER 15
    ITEM RO_NUM_SKILLED_EMP_NEEDED TYPE IS UNSIGNED NUMERIC 2
       ITEM RO_PROCESS_SPEC TYPE IS CHARACTER 80 OCCURS 4 TIMES
*************************************************************************
*  The ALTERNATE_OPERATION record contains the same information as the  *
*  ROUTING_OPERATION record EXCEPT the OPER_NUM becomes an              *
*  ALT_OPER_NUM.                                                RO050*  *
*************************************************************************
RECORD NAME IS ALTERNATE_OPERATION
  WITHIN PROCPLN2
    ITEM AO_ALT_OPER_NUM TYPE IS CHARACTER 4
    ITEM AO_OPER_DESC TYPE IS CHARACTER 15
    ITEM AO_DEPT TYPE IS CHARACTER 8
    ITEM AO_MACH_TYPE TYPE IS CHARACTER 8
    ITEM AO_STD_SETUP_HOURS TYPE IS PACKED DECIMAL 8 -3
    ITEM AO_STD_HOURS_PER_OPER TYPE IS PACKED DECIMAL 8 -3
    ITEM AO_PER_CODE TYPE IS UNSIGNED NUMERIC 1
    ITEM AO_REQED_TOOL_KIT_ID TYPE IS CHARACTER 8
    ITEM AO_NUM_TOOL_KITS_AVAIL TYPE IS UNSIGNED NUMERIC 2
    ITEM AO_SKILL_REQMT TYPE IS CHARACTER 8
    ITEM AO_SKILL_DESC TYPE IS CHARACTER 15
    ITEM AO_NUM_SKILLED_EMP_NEEDED TYPE IS UNSIGNED NUMERIC 2
       ITEM AO_PROCESS_SPEC TYPE IS CHARACTER 80 OCCURS 4 TIMES
*************************************************************************
*  The CONTINGENCY-OPERATION record contains the same information as   *
*  the ROUTING_OPERATION record EXCEPT the OPER_NUM becomes an         *
*  CONT_OPER_NUM.                                               RDnnn  *
*************************************************************************
RECORD NAME IS CONTINGENCY_OPERATION
  WITHIN PRDCPLN2
    ITEM CO_CONT_OPER_NUM TYPE IS CHARACTER 4
    ITEM CO_OPER_DESC TYPE IS CHARACTER 15
    ITEM CO_DEPT TYPE IS CHARACTER 8
    ITEM CO_MACH_TYPE TYPE IS CHARACTER 8
    ITEM CO_STD_SETUP_HOURS TYPE IS PACKED DECIMAL 8 -3
    ITEM CO_STD_HOURS_PER_OPER TYPE IS PACKED DECIMAL 8 -3
    ITEM CO_PER_CODE TYPE IS UNSIGNED NUMERIC 1
    ITEM CO_REQED_TOOL_KIT_ID TYPE IS CHARACTER 8
    ITEM CO_NUM_TOOL_KITS_AVAIL TYPE IS UNSIGNED NUMERIC 2
    ITEM CO_SKILL_REQMT TYPE IS CHARACTER 8
    ITEM CO_SKILL_DESC TYPE IS CHARACTER 15
    ITEM CO_NUM_SKILLED_EMP_NEEDED TYPE IS UNSIGNED NUMERIC 2
       ITEM CO_PROCESS_SPEC TYPE IS CHARACTER 80 OCCURS 4 TIMES
*************************************************************************
```

```
*****************************************************************************
*  The PRODUCTION_REQUIREMENT record contains information about            *
*  the production requirements that have been "loaded" into the            *
*  PP&CS data base from the higher level MRP system.              RD002    *
*****************************************************************************
RECORD NAME IS PRODUCTION_REQUIREMENT
  WITHIN FACLOAD
       ITEM PR_ORD_NUM TYPE IS CHARACTER 12
       ITEM PR_PART_NUM TYPE IS CHARACTER 24
       ITEM PR_RES_ID TYPE IS CHARACTER 8
       ITEM PR_ORD_QTY TYPE IS PACKED DECIMAL 8 -2
       ITEM PR_REQUIRED_DATE TYPE IS CHARACTER 10
       ITEM PR_STATUS_CODE TYPE IS CHARACTER 8
       ITEM PR_NO_ROUTING_FLAG TYPE IS CHARACTER 1
       ITEM PR_SCHED_PRDB_FLAG TYPE IS CHARACTER 1
       ITEM PR_EARL_START_DATE TYPE IS CHARACTER 10
       ITEM PR_ORD_REV_CODE TYPE IS PACKED DECIMAL 2
       ITEM PR_PRIDRITY_CODE_1 TYPE IS CHARACTER 8
       ITEM PR_PRIORITY_CODE_2 TYPE IS CHARACTER 8
       ITEM PR_EXPECTED_REL_DATE TYPE IS CHARACTER 10
       ITEM PR_REVISED_ORD_QTY TYPE IS PACKED DECIMAL 8
       ITEM PR_ACT_REL_DATE TYPE IS CHARACTER 10
       ITEM PR_PLANNED_ORD_QTY TYPE IS PACKED DECIMAL 8 -2
       ITEM PR_SPAN_TIME TYPE IS PACKED DECIMAL 8 -2
       ITEM PR_SUM_RUN_SETUP_TIME TYPE IS PACKED DECIMAL 8 -2
       ITEM PR_CALC_EAR_ST_DT TYPE IS CHARACTER 10
*****************************************************************************
*  The RESOURCE_MACH_TYPE_LOAD_PROFILE record contains an array            *
*  of excess capacity by planning period for each machine type within      *
*  a specified resource.                                          RDnnn    *
*****************************************************************************
RECORD NAME IS RESOURCE_MACH_TYPE_LOAD_PROFILE
  WITHIN FLARRAY
       ITEM RMTLP_MACH_TYPE TYPE IS CHARACTER 8
       ITEM RMTLP_NUM_MACH TYPE IS PACKED DECIMAL 3
       ITEM RMTLP_NUM_PLN_PERIOD TYPE IS PACKED DECIMAL 3
       ITEM RMTLP_MACH_ND TYPE IS CHARACTER 8
                              OCCURS 10 TIMES
       ITEM RMTLP_EXCESS_ARRAY TYPE IS PACKED DECIMAL 6 -2
                              OCCURS 400 TIMES
*****************************************************************************
*SUBSCHEMA PPCS_FL CONTAINS THE FOLLOWING REDEFINITION OF THE ABOVE ARRAY
*  ALIAS ITEM RMTLP_EXCESS_ARRAY OF RESOURCE_MACH_TYPE_LOAD_PROFILE
*        IS RMTLP_EXCESS_PERIOD
*  GROUP NAME IS RMTLP_EXCESS_GROUP OCCURS 10 TIMES
*     ITEM RMTLP_EXCESS_PERIOD OCCURS 40 TIMES
*  ENDGROUP RMTLP_EXCESS_GROUP
*****************************************************************************
*****************************************************************************
*  The MACH_INSTANCE_PLANNING_PERIOD record contains the loaded            *
*  hours and capacity hours by planning period for each machine RD043*     *
*****************************************************************************
```

```
*****************************************************************************
RECORD NAME IS MACH_INSTANCE_PLANNING_PERIOD
  WITHIN MIPPAREA
       ITEM MIPP_SER_NUM TYPE IS CHARACTER 8
       ITEM MIPP_PLN_PERIOD_SEQ_NO TYPE IS UNSIGNED NUMERIC 3
*   The above items are GROUPed as MIPP_CALC_KEY in the subschemas
       ITEM MIPP_RES_ID TYPE IS CHARACTER 8
       ITEM MIPP_MACH_TYPE TYPE IS CHARACTER 8
       ITEM MIPP_PLN_PERIOD_ID TYPE IS CHARACTER 10
       ITEM MIPP_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
       ITEM MIPP_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2
*****************************************************************************
*   The LOAD_UNIT record is a summarization of                              *
*   of PRODUCTION_REQUIREMENT_OPER that are designated for the              *
*   same resource machine type.                                  RD070*     *
*   The PRODUCTION_REQUIREMENT_OPER record contains information             *
*   about those operations that have been combined into load units.         *
*   The specific details include move & queue time flags, operation         *
*   and effective load hours, earliest start date, required date,           *
*   comppressed move & queue times, revision dates, operation status        *
*   and priority code, slack time copression candidate code, parallel       *
*   processing code, alternate operation flag and span time.      RD003     *
*****************************************************************************
```

```
RECORD NAME IS LDAD_UNIT
  WITHIN FACLDAD
       ITEM LU_ORD_NUM TYPE IS CHARACTER 12
       ITEM LU_BEGIN_OPER_NUM TYPE IS CHARACTER 4
       ITEM LU_END_OPER_NUM TYPE IS CHARACTER 4
       ITEM LU_EARL_ST_DT TYPE IS CHARACTER 10
       ITEM LU_LATE_ST_DT TYPE IS CHARACTER 10
       ITEM LU_EARL_COMPL_DT TYPE IS CHARACTER 10
       ITEM LU_REQUIRED_DATE TYPE IS CHARACTER 10
       ITEM LU_PRIORITY_CODE_1 TYPE IS CHARACTER 8
       ITEM LU_PRIORITY_CODE_2 TYPE IS CHARACTER 8
       ITEM LU_SLACK_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LU_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LU_QUEUE_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LU_SETUP_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LU_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 6 -2
       ITEM LU_COMPRES_FLAG TYPE IS CHARACTER 1
       ITEM LU_RES_ID TYPE IS CHARACTER 8
       ITEM LU_MACH_TYPE TYPE IS CHARACTER 8
       ITEM LU_STATUS TYPE IS CHARACTER 8
       ITEM LU_TOT_NUM_SEG TYPE IS PACKED DECIMAL 2
       ITEM LU_MOD_FLAG TYPE IS CHARACTER 1
       ITEM LU_PREV_RES TYPE IS CHARACTER 8
       ITEM LU_PREV_MACH_TYPE TYPE IS CHARACTER 8
       ITEM LU_SLACK_TIME_USED_TO_MOVE TYPE IS PACKED DECIMAL 6 -2
       ITEM LU_SPEC_START_DATE TYPE IS CHARACTER 10
       ITEM LU_SPEC_COMP_DATE TYPE IS CHARACTER 10
       ITEM LU_CALC_ST_DT TYPE IS CHARACTER 10
       ITEM LU_SEQUENCE_NUM TYPE IS UNSIGNED NUMERIC 4
       ITEM LU_ALT_OPER_FLAG TYPE IS CHARACTER 1
       ITEM LU_ALT_OPER_NUM TYPE IS CHARACTER 4
       ITEM LU_COMP_Q_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LU_COMP_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LU_OPER_SPAN_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LU_CHECK_COUNTER TYPE IS PACKED DECIMAL 8
       ITEM LU_PARALLEL_PROC TYPE IS CHARACTER 1
       ITEM LU_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
       ITEM LU_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
       ITEM LU_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
*****************************************************************
*  The LOAD_UNIT_SEGMENT record is generated for every          *
*  PRODUCTION_REQUIREMENT_OPER load that cannot be accommodated *
*  in a given planning period and must "over load" into another period *
*                                                          ROnnn *
*****************************************************************
RECORD NAME IS LOAD_UNIT_SEGMENT
  WITHIN FACLDAD
       ITEM LUS_ORD_NUM TYPE IS CHARACTER 12
       ITEM LUS_BEGIN_OPER_NUM TYPE IS CHARACTER 4
       ITEM LUS_END_OPER_NUM TYPE IS CHARACTER 4
       ITEM LUS_MULTI_PERIOD_FLAG TYPE IS CHARACTER 1
       ITEM LUS_SEG_NUM TYPE PACKED DECIMAL 2
       ITEM LUS_PARAL_PROC_FLAG TYPE IS CHARACTER 1
       ITEM LUS_MULTI_PARAL_PROC_FLAG TYPE IS CHARACTER 1
       ITEM LUS_LOAD_HRS TYPE IS PACKED DECIMAL 6 -2
```

```
*************************************************************************
*  The TRANSACTION record is used to store parameters necessary to run  *
*  a transaction.                                                RDnnn   *
*************************************************************************
RECORD NAME IS TRANSACTION
  WITHIN CONFIG
       ITEM T_TRAN_ID TYPE IS CHARACTER 6
       ITEM T_BUSY_FLAG TYPE IS CHARACTER 1
       ITEM T_TRAN_DESC TYPE IS CHARACTER 40
       ITEM T_USER_ID TYPE IS CHARACTER 12
       ITEM T_START_DATE TYPE IS CHARACTER 10
       ITEM T_START_TIME TYPE IS CHARACTER 8
       ITEM T_END_DATE TYPE IS CHARACTER 10
       ITEM T_END_TIME TYPE IS CHARACTER 8
       ITEM T_INFO_BLOCK TYPE IS CHARACTER 250
*************************************************************************
*  The PRIOR_TRANASACTION record is provided to permit modules to       *
*  identify those transactions that have been previously executed.      *
*                                                                RDnnn   *
*************************************************************************
RECORD NAME IS PRIOR_TRANSACTION
  WITHIN CONFIG
       ITEM PT_TRAN_ID TYPE IS CHARACTER 6
       ITEM PT_MISC_INFO TYPE IS CHARACTER 30
*************************************************************************
*  The ACTIVITY record is provided a means for transactions to keep     *
*  track of various information from activity to activity within the    *
*  transaction.                                                  RDnnn   *
*************************************************************************
RECORD NAME IS ACTIVITY
  WITHIN CONFIG
       ITEM A_ACTIVITY_ID TYPE IS CHARACTER 6
       ITEM A_STATUS TYPE IS CHARACTER 1
       ITEM A_DESC TYPE IS CHARACTER 40
       ITEM A_MISC_INFO TYPE IS CHARACTER 40
       ITEM A_NUM_SUBPROC TYPE IS PACKED DECIMAL 3
*************************************************************************
*  The SUBPROCESS_ACTIVITY record is provided for those situations      *
*  where multi-tasking has been invoked.  It contains the same          *
*  information as the ACTIVITY record.                           RDnnn   *
*************************************************************************
RECORD NAME IS SUBPROCESS_ACTIVITY
  WITHIN CONFIG
       ITEM SA_SUBPROCESS_ID TYPE IS UNSIGNED NUMERIC 3
       ITEM SA_ACTIVITY_ID TYPE IS CHARACTER 6
       ITEM SA_STATUS TYPE IS CHARACTER 1
       ITEM SA_DESC TYPE IS CHARACTER 40
       ITEM SA_MISC_INFO TYPE IS CHARACTER 60
*************************************************************************
*  The MOVE_TIME record contains information about the move time from   *
*  one resource machine type to another resource machine type.  RD061   *
*************************************************************************
```

```
RECORD NAME IS MOVE_TIME
  WITHIN FACLOAD
       ITEM MV_START_RES_ID TYPE IS CHARACTER 8
       ITEM MV_START_MACH_TYPE_ID TYPE IS CHARACTER 8
       ITEM MV_END_RES_ID TYPE IS CHARACTER 8
       ITEM MV_END_MACH_TYPE_ID TYPE IS CHARACTER 8
* The above items are GROUPed as MT_CALC_KEY in the subschemas
       ITEM MV_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM MV_MOVE_TIME_COMP_FACTOR TYPE IS PACKED DECIMAL 6 -2
       ITEM MV_MOVE_TIME_VAL_LIM TYPE IS PACKED DECIMAL 6 -2
*****************************************************************
*  The PLANNING_PERIOD record contains calendar information     *
*                                                        RD038*  *
*****************************************************************
RECORD NAME IS PLANNING_PERIOD
  WITHIN CONFIG
       ITEM PP_PERIOD_ID TYPE IS CHARACTER 10
       ITEM PP_GREG_DATE TYPE IS CHARACTER 10
       ITEM PP_FISCAL_YR TYPE IS CHARACTER 10
       ITEM PP_FISCAL_QTR TYPE IS CHARACTER 10
       ITEM PP_FISCAL_MO TYPE IS CHARACTER 10
       ITEM PP_FISCAL_WK TYPE IS CHARACTER 10
       ITEM PP_MDAY_NUM TYPE IS CHARACTER 6
       ITEM PP_GREG_ST_DT TYPE IS CHARACTER 10
       ITEM PP_GREG_END_DT TYPE IS CHARACTER 10
       ITEM PP_SHUT_DOWN_FLAG TYPE IS CHARACTER 1
*****************************************************************
* The M_DAY record contains the translation of calendar days to *
*  working days                                          RDnnn   *
*****************************************************************
RECORD NAME IS M_DAY
  WITHIN CONFIG
       ITEM MD_MDAY_NUM TYPE IS CHARACTER 6
       ITEM MD_GREG_DATE TYPE IS CHARACTER 10
       ITEM MD_FISCAL_YR TYPE IS CHARACTER 10
       ITEM MD_FISCAL_QTR TYPE IS CHARACTER 10
       ITEM MD_FISCAL_MO TYPE IS CHARACTER 10
       ITEM MD_FISCAL_WK TYPE IS CHARACTER 10
*****************************************************************
*  The GLOBAL_PARAMETER record contains parameters required by the *
*  functions that maintain the shop calendar              RDnnn   *
*****************************************************************
RECORD NAME IS GLOBAL_PARAMETER
  WITHIN CONFIG
       ITEM GP_ID TYPE IS CHARACTER 4
       ITEM GP_M_DAY_UPLIM TYPE IS CHARACTER 4
       ITEM GP_FW_BEGIN_DAY TYPE IS CHARACTER 1
       ITEM GP_PREV_FY_END TYPE IS CHARACTER 2
       ITEM GP_FWMONTHS TYPE IS CHARACTER 1
                        OCCURS 12 TIMES
*****************************************************************
*  SUBSCHEMAS CONTAIN THE FOLLOWING REDEFINITION OF GP_FWMONTHS  *
*  GROUP NAME IS GP_MONTH_ARRAY                                 *
*       ITEM GP_FWMONTHS TYPE IS CHARACTER 1 OCCURS 12 TIMES    *
*  ENDGROUP GP_MONTH_ARRAY                                      *
*****************************************************************
```

```
        ITEM GP_SUM_FW_BRKDWN TYPE IS CHARACTER 2
        ITEM GP_MAX_PART_SAMPLES TYPE IS PACKED DECIMAL 5
        ITEM GP_MAX_MOVE_SAMPLES TYPE IS PACKED DECIMAL 5
        ITEM GP_MAX_RMT_SAMPLES TYPE IS PACKED DECIMAL 5
        ITEM GP_MAX_RO_SAMPLES TYPE IS PACKED DECIMAL 5
        ITEM GP_EARLIEST_START_DT_ALL TYPE IS CHARACTER 10
        ITEM GP_LATEST_REQUIRED_DATE_ALL TYPE IS CHARACTER 10
        ITEM GP_MISSING_ROUTING_COUNT TYPE IS PACKED DECIMAL 4
        ITEM GP_MISSING_ROUTING_LIMIT TYPE IS PACKED DECIMAL 4
        ITEM GP_MISSING_MOVE_LIMIT TYPE IS PACKED DECIMAL 4
        ITEM GP_MISSING_QUEUE_LIMIT TYPE IS PACKED DECIMAL 4
        ITEM GP_SCHEDULE_PROB_LIMIT TYPE IS PACKED DECIMAL 4
        ITEM GP_PART_LEAD_TIME TYPE IS PACKED DECIMAL 6 -2
        ITEM GP_MOVE_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
        ITEM GP_Q_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
        ITEM GP_PRI_METHOD_1 TYPE IS UNSIGNED NUMERIC 1
        ITEM GP_PRI_METHOD_2 TYPE IS UNSIGNED NUMERIC 1
*****************************************************************************
*  The PART_HISTORY is provided to accumulate part history average data     *
*  and act as a "header" record that keeps grand averages for all past      *
*  history.  In this, and subseqquent history "header" records the          *
*  NUM_HIST_OCCUR is the field that counts the history instances, and       *
*  the MAX_NUM_SAMPLES determines the maximum number of detail records     *
*  for history.  NUM_OF_SAMPLE is the current count of history detail       *
*  instances.                                                       RDnnn   *
*****************************************************************************
RECORD NAME IS PART_HISTORY
  WITHIN PROCPLN1
        ITEM PH_PART_NUM TYPE IS CHARACTER 24
        ITEM PH_NUM_SAMPLES TYPE IS PACKED DECIMAL 5
        ITEM PH_MAX_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
        ITEM PH_NUM_OF_HIST_OCCUR TYPE IS PACKED DECIMAL 5
        ITEM PH_AVG_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_PLAN_QTY_VAR TYPE IS PACKED DECIMAL 10 -2
*****************************************************************************
*  The PART_HISTORY_SAMPLE record is the selected detail that is used       *
*  in the calculations found in the PART_HISTORY record.            RDnnn   *
*****************************************************************************
```

```
RECORD NAME IS PART_HISTORY_SAMPLE
  WITHIN PROCPLN1
       ITEM PHS_PART_NUM TYPE IS CHARACTER 24
       ITEM PHS_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
       ITEM PHS_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
       ITEM PHS_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
       ITEM PHS_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
       ITEM PHS_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM PHS_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
       ITEM PHS_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
       ITEM PHS_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
       ITEM PHS_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM PHS_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM PHS_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM PHS_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM PHS_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
       ITEM PHS_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
       ITEM PHS_PLAN_QTY_VAR TYPE IS PACKED DECIMAL 10 -2
       ITEM PHS_ACT_OPER_START_DATE TYPE IS CHARACTER 10
       ITEM PHS_ACT_OPER_COMP_DATE TYPE IS CHARACTER 10
       ITEM PHS_REQUIRED_DATE TYPE IS CHARACTER 10
*****************************************************************************
*  The ROUTING_OPERATION_HISTORY record is provided to retain               *
*  information for a specific operation that has been calculated from       *
*  actual performance data.                                  RD018, RD056   *
*****************************************************************************
RECORD NAME IS ROUTING_OPERATION_HISTORY
  WITHIN PROCPLN2
       ITEM ROH_ROUTING_NUM TYPE IS PACKED DECIMAL 2
       ITEM ROH_OPER_NUM TYPE IS CHARACTER 4
       ITEM ROH_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
       ITEM ROH_MAX_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
       ITEM ROH_NUM_OF_HIST_OCCUR TYPE IS PACKED DECIMAL 5
       ITEM ROH_AVG_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
       ITEM ROH_AVG_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
       ITEM ROH_AVG_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
       ITEM ROH_AVG_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
       ITEM ROH_AVG_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
       ITEM ROH_AVG_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
       ITEM ROH_AVG_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
       ITEM ROH_AVG_PLAN_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM ROH_AVG_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
       ITEM ROH_AVG_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM ROH_AVG_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM ROH_AVG_ACT_CLOCK_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM ROH_AVG_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM ROH_AVG_PLAN_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
*****************************************************************************
*  The ROUTING_OPERATION_HISTORY_SAMPL record is the detail history         *
*  to calculate the information in the ROUTING_OPERATION_HISTORY record*
*                                                                 RDnnn     *
*****************************************************************************
```

```
RECORD NAME IS RDUTING_OPERATIDN_HISTDRY_SAMPL
  WITHIN PRDCPLN2
       ITEM ROHS_ROUTING_NUM TYPE IS PACKED DECIMAL 2
       ITEM RDHS_OPER_NUM TYPE IS CHARACTER 4
       ITEM RDHS_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
       ITEM ROHS_IDLE_TIME_DCC TYPE IS PACKED DECIMAL 10 -2
       ITEM RDHS_ACT_CLDCK_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM RDHS_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
       ITEM RDHS_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
       ITEM RDHS_PLAN_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM ROHS_ACT_D_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM RDHS_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
       ITEM ROHS_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
       ITEM ROHS_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
       ITEM ROHS_ACT_SCRAP_DPER TYPE IS PACKED DECIMAL 10 -2
       ITEM RDHS_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM ROHS_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM ROHS_PLAN_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM RDHS_PLAN_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
       ITEM RDHS_MACH_UTIL TYPE IS PACKED DECIMAL  10 -2
       ITEM RDHS_DRD_DTY TYPE IS PACKED DECIMAL 10 -2
       ITEM RDHS_ACT_DPER_DTY TYPE IS PACKED DECIMAL 10 -2
       ITEM RDHS_REDUIRED_DATE TYPE IS CHARACTER 10
       ITEM RDHS_OPER_CDMP_DATE TYPE IS CHARACTER 10
       ITEM ROHS_DPER_START_DATE TYPE IS CHARACTER 10
*****************************************************************************
*  The RESDURCE_MACH_TYPE_HISTORY record is provided to accumulate          *
*  history for resource machine types.  The details for the calculated      *
*  data is contained in the ROUTING_OPERATION_HISTORY_SAMPL.      RDnnn      *
*****************************************************************************

RECORD NAME IS RESDURCE_MACH_TYPE_HISTDRY
  WITHIN CONFIG
       ITEM RMTH_RES_ID TYPE IS CHARACTER 8
       ITEM RMTH_MACHINE_TYPE TYPE IS CHARACTER 8
       ITEM RMTH_NUM_DF_SAMPLES TYPE IS PACKED DECIMAL 5
       ITEM RMTH_MAX_NUM_DF_SAMPLES TYPE IS PACKED DECIMAL 5
       ITEM RMTH_NUM_OF_HIST_DCCUR TYPE IS PACKED DECIMAL 5
       ITEM RMTH_AVG_ORD_DTY TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTH_AVG_ACT_DPER_QTY TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTH_AVG_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTH_AVG_ACT_SCRAP_DPER TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTH_AVG_EFFECT_LDAD_HRS TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTH_AVG_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTH_AVG_PLAN_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTH_AVG_PLAN_SETUP_LDSS TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTH_AVG_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTH_AVG_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTH_AVG_PLAN_DUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTH_AVG_ACT_D_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTH_AVG_MACH_UTIL TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTH_AVG_IDLE_TIME_OCC TYPE IS PACKED DECIMAL 10 -2
*****************************************************************************
*  The PR_CHANGE_REDUEST record is provided to retain                       *
*  chanages to the PRODUCTION_REQUIREMENT records.              RD046       *
*****************************************************************************
```

```
RECORD NAME IS PR_CHANGE_REQUEST
  WITHIN FACLOAD
       ITEM PRCR_CHANGE_ID TYPE IS PACKED DECIMAL 3
       ITEM PRCR_EARL_START_DATE TYPE IS CHARACTER 10
       ITEM PRCR_REQUIRED_DATE TYPE IS CHARACTER 10
       ITEM PRCR_ORD_QTY TYPE IS PACKED DECIMAL 8 -2
       ITEM PRCR_CANCEL_FLAG TYPE IS CHARACTER 1
*****************************************************************************
*  The LOAD_UNIT_ACTUAL_PERFORMANCE record is provided to accumulate       *
*  production operation actual performance data on an interim basis        *
*  until performance statistics are calculated.                  RD055     *
*****************************************************************************
RECORD NAME IS LOAD_UNIT_ACTUAL_PERFORMANCE
  WITHIN FACLOAD
       ITEM LUAP_ORD_NUM TYPE IS CHARACTER 12
       ITEM LUAP_DATE_PERF_REP TYPE IS CHARACTER 10
       ITEM LUAP_SHIFT_PERF_REP TYPE IS CHARACTER 8
       ITEM LUAP_ACT_OPER_START_DATE TYPE IS CHARACTER 10
       ITEM LUAP_ACT_OPER_COMP_DATE TYPE IS CHARACTER 10
       ITEM LUAP_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 6 -2
       ITEM LUAP_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 6 -2
       ITEM LUAP_MACH_DOWN_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LUAP_ACT_O_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LUAP_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LUAP_ACT_OPER_QTY TYPE IS PACKED DECIMAL 8
       ITEM LUAP_IDLE_TIME_OCC TYPE IS PACKED DECIMAL 8
       ITEM LUAP_RES_UTIL_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LUAP_MISS_ACT_VALUE_FLAG TYPE IS CHARACTER 1
       ITEM LUAP_LIM_VIDL_FLAG TYPE IS CHARACTER 1
       ITEM LUAP_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 8
       ITEM LUAP_ACT_CLOCK_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LUAP_MACH_UTIL TYPE IS PACKED DECIMAL 2
       ITEM LUAP_START_DATE_ACT_SU TYPE IS CHARACTER 10
       ITEM LUAP_COMPL_DATE_ACT_SU TYPE IS CHARACTER 10
       ITEM LUAP_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 8
       ITEM LUAP_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
       ITEM LUAP_START_RES_ID TYPE IS CHARACTER 8
       ITEM LUAP_START_MACH_TYPE_ID TYPE IS CHARACTER 8
       ITEM LUAP_END_RES_ID TYPE IS CHARACTER 8
       ITEM LUAP_END_MACH_TYPE_ID TYPE IS CHARACTER 8
       ITEM LUAP_ADJ_SETUP_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LUAP_ADJ_RUN_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LUAP_ADJ_RES_UTIL_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LUAP_ADJ_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LUAP_ADJ_O_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LUAP_ADJ_OPER_QTY TYPE IS PACKED DECIMAL 6 -2
       ITEM LUAP_ADJ_IDLE_OCC TYPE IS PACKED DECIMAL 6 -2
*****************************************************************************
*  The RMT_PLANNING_PERIOD record contains the loaded hours                 *
*  and capacity hours by planning period for each resource machine          *
*  type.                                                        RD044*      *
*****************************************************************************
```

```
RECORD NAME IS RMT_PLANNING_PERIOD
  WITHIN LTFLOAD
       ITEM RMTPP_RES_ID TYPE IS CHARACTER 8
       ITEM RMTPP_MACH_TYPE TYPE IS CHARACTER 8
       ITEM RMTPP_PLN_PERIDD_ID TYPE IS CHARACTER 10
*   The above items are GROUPed as RMTPP_CALC_KEY in the subschemas
       ITEM RMTPP_PLN_PERIOD_NO TYPE IS PACKED DECIMAL 4
       ITEM RMTPP_TDTAL_LDAD_HRS TYPE IS PACKED DECIMAL 8 -2
       ITEM RMTPP_TOTAL_CAPACITY_HRS TYPE IS PACKED DECIMAL 8 -2
       ITEM RMTPP_CUM_LDAD_HRS TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTPP_CUM_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTPP_AVERAGE_CAPACITY TYPE IS PACKED DECIMAL 10 -2
       ITEM RMTPP_NUM_MDAYS TYPE IS PACKED DECIMAL 6
       ITEM RMTPP_BEGIN_DATE TYPE IS CHARACTER 10
       ITEM RMTPP_END_DATE TYPE IS CHARACTER 10
*****************************************************************
*   The LT_LOAD_UNIT record is a summarization of the           *
*   PRDDUCTIDN_REQUIREMENT_OPER that are designated for the same *
*   resource machine type and utilized for long term loading.   *
*                                                        RD067* *
*****************************************************************

RECORD NAME IS LT_LDAD_UNIT
  WITHIN LTFLDAD
       ITEM LTLU_ORD_NUM TYPE IS CHARACTER 12
       ITEM LTLU_BEGIN_DPER_NUM TYPE IS CHARACTER 4
       ITEM LTLU_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 6 -2
       ITEM LTLU_TDT_NUM_SEG TYPE IS PACKED DECIMAL 2
       ITEM LTLU_RES_ID TYPE IS CHARACTER 8
       ITEM LTLU_MACH_TYPE TYPE IS CHARACTER 8
*   The above two fields are GROUPED as LTLU_CURRENT_LTRMT
*****************************************************************
*   The LT_LOAD_UNIT_SEGMENT record is generated for every      *
*   PRODUCTION_REQUIREMENT_OPER load that cannot be accommodated in a *
*   given planning period and must be "over loaded" into another period *
*                                                        RD069* *
*****************************************************************

RECORD NAME IS LT_LDAD_UNIT_SEGMENT
  WITHIN LTFLDAD
       ITEM LTLUS_DRD_NUM TYPE IS CHARACTER 12
       ITEM LTLUS_BEGIN_DPER_NUM TYPE IS CHARACTER 4
       ITEM LTLUS_SEG_NUM TYPE IS PACKED DECIMAL 4
       ITEM LTLUS_EFFECT_LDAD_HRS TYPE IS PACKED DECIMAL 6 -2
       ITEM LTLUS_RES_ID TYPE IS CHARACTER 8
       ITEM LTLUS_MACH_TYPE TYPE IS CHARACTER 8
*   The above two fields are GRDUPED as LTLUS_LTRMT_ID
       ITEM LTLUS_SLACK_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LTLUS_COMP_D_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LTLUS_COMP_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
       ITEM LTLUS_PLN_PERIDD_ND TYPE IS PACKED DECIMAL 4
       ITEM LTLUS_PRIDRITY_CODE_1 TYPE IS CHARACTER 8
       ITEM LTLUS_PRIDRITY_CODE_2 TYPE IS CHARACTER 8
       ITEM LTLUS_MOD_FLAG TYPE IS CHARACTER 1
       ITEM LTLUS_START_DATE TYPE IS CHARACTER 10
       ITEM LTLUS_END_DATE TYPE IS CHARACTER 10
*****************************************************************
*   The LT_RES_MACH_TYP_LDAD_PRDFILE record is provided to determine *
*   load  possibilities versus capacity for a given period.    RDnnn *
*****************************************************************
```

```
RECORD NAME IS LT_RES_MACH_TYP_LOAD_PROFILE
  WITHIN LTFLOAD
       ITEM LTRMTLP_RES_ID TYPE IS CHARACTER 8
       ITEM LTRMTLP_MACH_TYPE TYPE IS CHARACTER 8
       ITEM LTRMTLP_PLN_PERIOD_ID TYPE IS CHARACTER 10
                                  OCCURS 26 TIMES
       ITEM LTRMTLP_NUM_PLN_PERIODS TYPE IS PACKED DECIMAL 4
       ITEM LTRMTLP_NUM_MACHINES TYPE IS PACKED DECIMAL 4
       ITEM LTRMTLP_TDTAL_LOAD TYPE IS PACKED DECIMAL 10 -2
                                  OCCURS 26 TIMES
       ITEM LTRMTLP_PLN_PERIOD_NO TYPE IS PACKED DECIMAL 4
                                  OCCURS 26 TIMES
       ITEM LTRMTLP_CUM_CAPACITY TYPE IS PACKED DECIMAL 10 -2
                                  OCCURS 26 TIMES
       ITEM LTRMTLP_TDTAL_CAPACITY TYPE IS PACKED DECIMAL 10 -2
                                  OCCURS 26 TIMES
       ITEM LTRMTLP_CUM_LOAD TYPE IS PACKED DECIMAL 10 -2
                                  OCCURS 26 TIMES
       ITEM LTRMTLP_AVERAGE_CAPACITY TYPE IS PACKED DECIMAL 10 -2
                                  OCCURS 26 TIMES
       ITEM LTRMTLP_NUM_MDAYS TYPE IS PACKED DECIMAL 6
                                  OCCURS 26 TIMES
       ITEM LTRMTLP_BEGIN_DATE TYPE IS CHARACTER 10
                                  OCCURS 26 TIMES
       ITEM LTRMTLP_END_DATE TYPE IS CHARACTER 10
                                  OCCURS 26 TIMES
*****************************************************************************
*  The LT_RESOURCE_MACHINE_TYPE record is provided to identify those       *
*  resource machine types required for long term processing activity       *
*  eliminating the need to access the RESOURCE_MACHINE_TYPE record         *
*  during this activcity.                                          RDnnn    *
*****************************************************************************
RECORD NAME IS LT_RESOURCE_MACHINE_TYPE
  WITHIN LTFLOAD
       ITEM LTRMT_RES_ID TYPE IS CHARACTER 8
       ITEM LTRMT_MACH_TYPE TYPE IS CHARACTER 8
       ITEM LTRMT_BAL_SEL TYPE IS CHARACTER 1
       ITEM LTRMT_OVERLOADED_PD_FLAG TYPE IS CHARACTER 1
*****************************************************************************
*  The LT_PRODUCTIDN_REOUIREMENT record is provided to identify            *
*  production requirements selected for long term processing.  RDnnn       *
*****************************************************************************
RECORD NAME IS LT_PRODUCTION_REQUIREMENT
  WITHIN LTFLDAD
       ITEM LTPR_DRD_NUM TYPE IS CHARACTER 12
       ITEM LTPR_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
```

```
*****************************************************************************
*  The CAPACITY_INTERVAL record is provided to identify the period of      *
*  time in which a resource machine type or machine instance is            *
*  available to perform a specified operation.                    RD074*   *
*****************************************************************************
RECORD NAME IS CAPACITY_INTERVAL
  WITHIN CONFIG
       ITEM CI_RES_ID TYPE IS CHARACTER 8
       ITEM CI_MACHINE_TYPE TYPE IS CHARACTER 8
       ITEM CI_MACH_SER_NUM TYPE IS CHARACTER 8
       ITEM CI_BEGIN_INTERVAL_ID TYPE IS CHARACTER 10
       ITEM CI_END_INTERVAL_ID TYPE IS CHARACTER 10
       ITEM CI_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2
*****************************************************************************
*  The MOVE_HISTORY record is provided to record a number of               *
*  move time occurences.                                          RDnnn    *
*****************************************************************************
RECORD NAME IS MOVE_HISTORY
  WITHIN FACLOAD
       ITEM MH_START_RES_ID TYPE IS CHARACTER 8
       ITEM MH_START_MACH_TYPE_ID TYPE IS CHARACTER 8
       ITEM MH_END_RES_ID TYPE IS CHARACTER 8
       ITEM MH_END_MACH_TYPE_ID TYPE IS CHARACTER 8
       ITEM MH_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
       ITEM MH_MAX_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
       ITEM MH_NUM_OF_HIST_OCCUR TYPE IS PACKED DECIMAL 5
       ITEM MH_AVG_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM MH_AVG_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
*****************************************************************************
*  The MOVE_HISTORY_SAMPLE record provides the detail for the              *
*  information calculated in the MOVE_HISTORY record.             RDnnn    *
*****************************************************************************
RECORD NAME IS MOVE_HISTORY_SAMPLE
  WITHIN FACLOAD
       ITEM MHS_START_RES_ID TYPE IS CHARACTER 8
       ITEM MHS_START_MACH_TYPE_ID TYPE IS CHARACTER 8
       ITEM MHS_END_RES_ID TYPE IS CHARACTER 8
       ITEM MHS_END_MACH_TYPE_ID TYPE IS CHARACTER 8
       ITEM MHS_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
       ITEM MHS_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
*****************************************************************************
*  The LU_STATE record is provided to permit access to LOAD_UNIT           *
*  records that are in a given state. i.e. process, complete      RDnnn    *
*****************************************************************************
RECORD NAME IS LU_STATE
  WITHIN FACLOAD
       ITEM LUST_STATE_ID TYPE IS CHARACTER 4
       ITEM LUST_STATE_DESC TYPE IS CHARACTER 24
*****************************************************************************
*  The LU_STATE_RELATION record is provided to permit a many-to-many       *
*  relationship to bestablished between LU_STATE and LOAD_UNIT.   RDnnn    *
*****************************************************************************
RECORD NAME IS LU_STATE_RELATION
  WITHIN FACLOAD
       ITEM LSR_FIELD TYPE IS CHARACTER 4
```

```
*****************************************************************************
*  The PR_STATE record is provided to permit efficient access               *
*  to production requirement records that have different status.            *
*                                                                    RDnnn  *
*****************************************************************************
RECORD NAME IS PR_STATE
  WITHIN CONFIG
       ITEM PRS_PRSTATE_ID TYPE IS CHARACTER 4
       ITEM PRS_PRSTATE_DESC TYPE IS CHARACTER 24
*****************************************************************************
*  The PR_STATE_RELATION record is provided to accommodate the              *
*  many-to-many relationship that can exist between production              *
*  PRODUCTION_REQUIREMENT records and PR_STATE records.              RDnnn  *
*****************************************************************************
RECORD NAME IS PR_STATE_RELATION
  WITHIN CONFIG
       ITEM PRSR_PRFIELD TYPE IS CHARACTER 4
*****************************************************************************
*  The TEMP_LTLU record is provided to accommodate temporary storage        *
*  requiremnts for long term loading processing.  The occurs fields         *
*  (GROUP_A, GROUP_B, GROUP_C) are redefined in the TOTSUB_LTL.  RDnnn      *
*****************************************************************************
RECORD NAME IS TEMP_LTLU
  WITHIN LTTEMP
       ITEM TLTLU_TEMP_AREA TYPE IS CHARACTER 122
                    OCCURS 20 TIMES
*****************************************************************************
*                          SYSTEM-OWNED SETS                                *
*  The following is a list of system-owned sets in the schema.  All         *
*  records defined as "CALC" must be members of a set in which the          *
*  SYSTEM is the owner.  These sets will not be portrayed in the            *
*  schema diagram.                                                          *
*       ALL_LEVEL                                                           *
*       ALL_RESOURCE                                                        *
*       ALL_MACHINE_TYPE                                                    *
*       ALL_PART                                                            *
*       ALL_PRODUCTION_REQUIREMENT                                          *
*       ALL_RESOURCE_MACHINE_TYPE                                           *
*       ALL_TRANSACTION                                                     *
*       ALL_MACH_INSTANCE_PLAN_PERIOD                                       *
*       ALL_PLANNING_PERIOD                                                 *
*       ALL_GLOBAL_PARAMETER                                                *
*       ALL_MOVE_TIME                                                       *
*       ALL_LU_STATE                                                        *
*       ALL_PR_STATE                                                        *
*       ALL_LT_RESOURCE_MACHINE_TYPE                                        *
*       ALL_RMT_PLANNING_PERIOD                                             *
*       ALL_PRODUCTION_REQUIREMENT                                          *
*       ALL_RESOURCE_PLANNING_PERIOD                                        *
*****************************************************************************
```

```
*****************************************************************************
*  The following are SYSTEM_owned sets defined for the prototype.           *
*****************************************************************************

SET NAME IS ALL_LEVEL
    OWNER IS SYSTEM
      MEMBER IS LEVEL
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED

SET NAME IS ALL_RESOURCE
    OWNER IS SYSTEM
      MEMBER IS RESOURCE
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED

SET NAME IS ALL_MACHINE_TYPE
    OWNER IS SYSTEM
      MEMBER IS MACHINE_TYPE
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED

SET NAME IS ALL_PART
    OWNER IS SYSTEM
      MEMBER IS PART
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED

SET NAME IS ALL_PRODUCTION_REQUIREMENT
    OWNER IS SYSTEM
      MEMBER IS PRODUCTION_REQUIREMENT
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED

SET NAME IS ALL_RESOURCE_MACHINE_TYPE
    OWNER IS SYSTEM
      MEMBER IS RESOURCE_MACHINE_TYPE
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED

SET NAME IS ALL_MACH_INSTANCE_PLAN_PERIOD
    OWNER IS SYSTEM
      MEMBER IS MACH_INSTANCE_PLANNING_PERIOD
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED

SET NAME IS ALL_PLANNING_PERIOD
    OWNER IS SYSTEM
      MEMBER IS PLANNING_PERIOD
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED

SET NAME IS ALL_TRANSACTION
    OWNER IS SYSTEM
      MEMBER IS TRANSACTION
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED
```

```
SET NAME IS ALL_GLOBAL_PARAMETER
    OWNER IS SYSTEM
      MEMBER IS GLOBAL_PARAMETER
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED

SET NAME IS ALL_MOVE_TIME
    OWNER IS SYSTEM
      MEMBER IS MOVE_TIME
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED

SET NAME IS ALL_LU_STATE
    OWNER IS SYSTEM
      MEMBER IS LU_STATE
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED

SET NAME IS ALL_PR_STATE
    OWNER IS SYSTEM
      MEMBER IS PR_STATE
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED

SET NAME IS ALL_LT_RESOURCE_MACHINE_TYPE
    OWNER IS SYSTEM
      MEMBER IS LT_RESOURCE_MACHINE_TYPE
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED

SET NAME IS ALL_RMT_PLANNING_PERIOD
    OWNER IS SYSTEM
      MEMBER IS RMT_PLANNING_PERIOD
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED

SET NAME IS ALL_LT_PRODUCTION_REQUIREMENT
    OWNER IS SYSTEM
      MEMBER IS LT_PRODUCTION_REQUIREMENT
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED

SET NAME IS ALL_RESOURCE_PLANNING_PERIOD
    OWNER IS SYSTEM
      MEMBER IS RESOURCE_PLANNING_PERIOD
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED
```

SECTION 1 OF 3

SETS

The following is a list of all the non-system sets contained in the schema.

OWNER RECORD	SET	MEMBER
LEVEL	CONTAINS_R	RESOURCE
	SEL_FOR_RELEASE	RESOURCE
RESOURCE	MAY_EXIST_AS	MACHINE_INSTANCE
	HAS	RESOURCE_MACHINE_TYPE
	IS_RESPONSIBLE_FOR	PRODUCTION_REQUIREMENT
	RELEASE_BY_DATE	PRODUCTION_REQUIREMENT
	IS_ASSIGNED	PRODUCTION_REQUIREMENT
	HAS_SHORT_TERM_LOAD	PRODUCTION_REQUIREMENT
	HAS_PSUEDO_RELEASE	PRODUCTION_REQUIREMENT
	CONTAINS_RELEASE	PRODUCTION_REQUIREMENT
	CONTAINS_LLR	LOWER_LEVEL_RESOURCE
	IS_ALSO	LOWER_LEVEL_RESOURCE
	HAS_LT_RES_PROFILE	RESOURCE_PLANNING_PERIOD
MACHINE_TYPE	IS_REPRESENTED_BY	MACHINE_INSTANCE
	IS_USED_AS	RESOURCE_MACHINE_TYPE
RESOURCE_MACHINE_TYPE	CONSISTS_OF_MI	MACHINE_INSTANCE
	HAS_SHORT_TERM_PROFILE	RESOURCE_MACH_TYPE_LOAD_PROFILE
	HAS_PROBS_LOADING	LOAD_UNIT
	HAS_CI	CAPACITY_INTERVAL
	HAS_RMTH	RESOURCE_MACH_TYPE_HISTORY
RESOURCE_MACH_TYPE_HISTORY	HAS_RMTH_DETAIL	ROUTING_OPERATION_HISTORY_SAMPL
MACHINE_INSTANCE	IS_PROFILED_BY	MACH_INSTANCE_PLANNING_PERIOD
	ALSO_HAS_CI	CAPACITY_INTERVAL

```
*****************************************************************************
*                                                   SECTION 2 OF 3          *
*  PART                    HAS_RDUTING            PLANNED_ROUTING           *
*                          HAS_BEEN_OROERED_IN    PRODUCTIDN_REQUIREMENT    *
*                          HAS_PART_HISTDRY       PART_HISTORY              *
*  PART_HISTDRY            HAS_PHS                PART_HISTDRY-SAMPLE       *
*  PLANNED_ROUTING         IS_COMPOSED            RDUTING_OPERATION         *
*  ROUTING_OPERATION       MAY_BE_REPLACED_BY     ALTERNATE_OPERATION       *
*                          HAS_LU                 LOAD_UNIT                 *
*                          HAS_RDH                RDUTING_OPERATION_HISTORY *
*  ROUTING_OPERATIDN_      HAS_ROHS               RDUTING_OPERATION_HISTORY *
*  HISTORY                                        SAMPL                     *
*  ALTERNATE_OPERATION     MAY_ALSD_REQUIRE       CONTINGENCY_OPERATION     *
*  PRODUCTIDN_             CONSISTS_OF_LU         LDAD_UNIT                 *
*    REQUIREMENT           CONSOLIOATEO_LU        LDAD_UNIT                 *
*                          HAS_UNPROCESSED_       PR_CHANGE_REQUEST         *
*                               REQUESTS                                     *
*                          CAN_BE_OESCRIBEO_BY    PR_STATE_RELATION         *
*  MACHINE_INSTANCE_       IS_LDADED_WITH         LOAD_UNIT                 *
*    PLANNING_PERIDD                              LDAD_UNIT_SEGMENT         *
*  LOAD_UNIT               IS_BROKEN_INTO         LDAD_UNIT_SEGMENT         *
*                          HAS_LOAP               LDAD_UNIT_ACTUAL_         *
*                                                 PERFDRMANCE               *
*                          IS_CHARACTERIZED_BY    LU_STATE_RELATION         *
*  PLANNING_PERIOO         MAY_BE_SPECIFIED_BY    M_DAY                     *
*  PR_STATE                INCLUDES_PR            PR_STATE_RELATION         *
*  MOVE_TIME               HAS_MOVE_HISTORY       MOVE_HISTORY              *
*  MOVE_HISTORY            HAS_MHS                MOVE_HISTORY_SAMPLE       *
*  LU_STATE                APPEARS_AS             LU-STATE_RELATION         *
*****************************************************************************
*****************************************************************************
*                                                   SECTION  3 OF 3         *
*  LT_PRODUCTION_          HAS_ELIGIBLE_LTLU     LT_LOAO_UNIT               *
*     REQUIREMENT          HAS_TEMP_LTLU          TEMP_LTLU                 *
*  LT_RESOURCE_MACHINE_    HAS_LT_RMT_PROFILE     RMT_PLANNING_PERIOO       *
*     TYPE                 IS_PROFILEO_BY_LT_     LT_RES_MACH_TYP_LOAO_     *
*                             LTRMTLP                PROFILE                *
*  RMT_PLANNING_PERIDD     IS_COMPOSEO_LTLU_SEG   LT_LOAD_UNIT_SEGMENT      *
*  LT_LOAD_UNIT            IS_BROKEN_INTO_        LT_LDAD_UNIT_SEGMENT      *
*                             LTLU_SEGMENT                                  *
*  TRANSACTIDN             IS_MADE_UP_OF          ACTIVITY                  *
*                          IS_A                   PRIOR_TRANSACTION         *
*                          IS_EXECUTED_AFTER      PRIOR_TRANSACTION         *
*  ACTIVITY                MAY_BE_PERFORMEO_AS    SUBPROCESS_ACCTIVITY      *
*****************************************************************************
*****************************************************************************
*  The CONTAINS_R set connects the LEVEL record to the RESOURCE record.     *
*  It provides the hierarchy for the resources within the factory.          *
*  RESOURCE records should be inserted last.                                *
*****************************************************************************
SET NAME IS CONTAINS_R
    OWNER IS LEVEL
      MEMBER IS RESOURCE
      INSERTION IS AUTOMATIC
      RETENTION IS OPTIONAL
      OROER IS LAST
*****************************************************************************
```

```
*****************************************************************************
*  The SEL_FOR_RELEASE set connects the LEVEL record to the RESOURCE        *
*  record.  It identifies those resources that require load to be           *
*  released.  RESOURCE records are manually inserted last with an           *
*  retention status.                                                        *
*****************************************************************************

SET NAME IS SEL_FOR_RELEASE
    OWNER IS LEVEL
      MEMBER IS RESOURCE
       INSERTION IS MANUAL
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************************
*  The MAY_EXIST_AS set connects the RESOURCE record to the                 *
*  MACHINE_INSTANCE record.  Each unique machine must be identified         *
*  in the resource hierarchy.  MACHINE_INSTANCE records should be           *
*  automatically inserted last with an optional retention status.           *
*****************************************************************************

SET NAME IS MAY_EXIST_AS
    OWNER IS RESOURCE
      MEMBER IS MACHINE_INSTANCE
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************************
*  The HAS set connects the RESOURCE record to the                          *
*  RESOURCE_MACHINE_TYPE record. Information about machine types            *
*  withn a given resource must be maintained.  The                          *
*  RESOURCE_MACHINE_TYPE record should be automatically inserted last       *
*  with an optional retention status.                                       *
*****************************************************************************

SET NAME IS HAS
    OWNER IS RESOURCE
      MEMBER IS RESOURCE_MACHINE_TYPE
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       OROER IS LAST
*****************************************************************************
*  The IS_RESPONSIBLE_FOR set connects the RESOURCE record                  *
*  with the PROOUCTION_REQUIREMENT record.  All production requirements     *
*  are assigned to a resource when "downloaded" from the MRP system         *
*  The PROOUCTION_REOUIREMENT records should be automatically inserted      *
*  last with an optional retention status.                                  *
*****************************************************************************

SET NAME IS IS_RESPONSIBLE_FOR
    OWNER IS RESOURCE
      MEMBER IS PROOUCTION_REQUIREMENT
       INSERTION IS MANUAL
       RETENTION IS OPTIONAL
       OROER IS LAST
*****************************************************************************
*  The RELEASE_BY_OATE set connects the RESOURCE record with the            *
*  PROOUCTION-REQUIREMENT record.  It identifies production requirements   *
*  to be released sorted by date.  PROOUCTION_REOUIREMENT records are       *
*  inserted manually sorted by earliest start date with an optional         *
*  retention status.                                                        *
*****************************************************************************
```

```
SET NAME IS RELEASE_BY_DATE
    OWNER IS RESDURCE
    MEMBER IS PRODUCTIDN_REQUIREMENT
     INSERTION IS MANUAL
     RETENTION IS OPTIDNAL
     ORDER IS SORTED BY
                ASCENDING PR_EARL_START_DATE
                DUPLICATES ARE NOT ALLOWED
*************************************************************************
*  The IS_ASSIGNED set connects the RESOURCE record with the            *
*  PRODUCTION_REQUIREMENT record.  It identifies all those              *
*  production requirements that have been assigned to resources after   *
*  short term load and balancing have taken place.                      *
*  PRODUCTION_REQUIREMENT records are inserted manually with optional   *
*  retention and are sorted by required date.                           *
*************************************************************************
SET NAME IS_ASSIGNED
    OWNER IS RESDURCE
      MEMBER IS PRODUCTIDN_REQUIREMENT
       INSERTION IS MANUAL
       RETENTION IS DPTIONAL
       ORDER IS SORTED BY
                  ASCENDING PR_REQUIRED_DATE
                  DUPLICATES ARE LAST
*************************************************************************
*  The HAS_SHDRT_TERM_LOAD connects the RESDURCE record with the        *
*  PRDDUCTION_REQUIREMENT record.  It contains all production           *
*  requirements that have been loaded and balanced.                     *
*  PRODUCTION_REQUIREMENT records are manually inserted with optional   *
*  retention last.                                                      *
*************************************************************************
SET NAME IS HAS_SHORT_TERM_LDAD
    OWNER IS RESOURCE
      MEMBER IS PRODUCTION_REQUIREMENT
       INSERTION IS MANUAL
       RETENTION IS DPTIONAL
       DRDER IS LAST
*************************************************************************
*  The HAS_PSUEDO_RELEASE set connects the RESDURCE record with the     *
*  PRODUCTION_REQUIREMENT record.  This set identifies all production   *
*  requirements that have selected for release and have estimated       *
*  release dates established.  The PRDDUCTION_REQUIREMENT records are   *
*  inserted manually with an optional retention last.                   *
*************************************************************************
SET NAME IS HAS_PSUEDD_RELEASE
    OWNER IS RESDURCE
      MEMBER IS PRDDUCTIDN_REQUIREMENT
       INSERTION IS MANUAL
       RETENTION IS OPTIONAL
       ORDER IS LAST
*************************************************************************
*  The CONTAINS_RELEASE set connects the RESOURCE record with the       *
*  PRODUCTION_REQUIREMENT record.  This set contains all production     *
*  requirements that have been released.  PRODUCTIDN_REQUIREMENT records*
*  are inserted manually with optional retention sorted by required date*
*************************************************************************
```

```
SET NAME IS CONTAINS_RELEASE
    OWNER IS RESOURCE
      MEMBER IS PRODUCTION_REQUIREMENT
       INSERTION IS MANUAL
       RETENTION IS OPTIONAL
       ORDER IS SORTED BY
                    ASCENDING PR_REQUIRED_DATE
                    DUPLICATES ARE LAST
*****************************************************************************
*  The CONTAINS_LLR set connects the RESOURCE record to the                 *
*  LOWER_LEVEL_RESOURCE record.  This set is provided to accommodate        *
*  the hierarchy of resources required.  The LOWER_LEVEL_RESOURCE           *
*  records should be inserted automatically last with a fixed               *
*  retention status.                                                        *
*****************************************************************************
SET NAME IS CONTAINS_LLR
    OWNER IS RESOURCE
      MEMBER IS LOWER_LEVEL_RESOURCE
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************************
*  The IS_ALSO set connects the RESOURCE record to the                      *
*  LOWER_LEVEL_RESOURCE record.  It is provided to accommodate the          *
*  many-to-many relationship required.  The RESOURCE records                *
*  should be inserted automatically last with a fixed status.               *
*****************************************************************************
SET NAME IS IS_ALSO
    OWNER IS RESOURCE
      MEMBER IS LOWER_LEVEL_RESOURCE
       INSERTION IS MANUAL
       RETENTION IS FIXED
       ORDER IS LAST
*****************************************************************************
*  The HAS_LT_RES_PROFILE set connects the RESOURCE record with the         *
*  RESOURCE_PLANNING_PERIOD record.  A summarization of load vs.            *
*  capacity is provided for varying levels of resources.                    *
*  RESOURCE_PLANNING_PERIOD records are automatically inserted last         *
*  with an optional retention status.                                       *
*****************************************************************************
SET NAME IS HAS_LT_RES_PROFILE
    OWNER IS RESOURCE
      MEMBER IS RESOURCE_PLANNING_PERIOD
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************************
*  The IS_REPRESENTED_BY set connects the MACHINE_TYPE record with the      *
*  MACHINE_INSTANCE record.  Each unique machine in the factory has to      *
*  classified by type.  MACHINE_INSTANCE records should be                  *
*  automatically inserted last in the set with an optional retention        *
*  status.                                                                  *
*****************************************************************************
```

```
SET NAME IS IS_REPRESENTEO_BY
    OWNER IS MACHINE_TYPE
      MEMBER IS MACHINE_INSTANCE
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************************
*  The IS_USED_AS set connects the MACHINE_TYPE record with the             *
*  RESOURCE_MACHINE_TYPE record.  Each machine type is identified           *
*  within a given resource.  The RESOURCE_MACHINE_TYPE records should       *
*  be automatically inserted last with an optional retention status.        *
*****************************************************************************
SET NAME IS IS_USED_AS
    OWNER IS MACHINE_TYPE
      MEMBER IS RESOURCE_MACHINE_TYPE
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       OROER IS LAST
*****************************************************************************
*  The CONSISTS_OF_MI set connects the RESOURCE_MACHINE_TYPE record         *
*  with the MACHINE_INSTANCE record.  Each unique machine mus  be           *
*  identified by machine type and resource classification.  Th              *
*  MACHINE_INSTANCE records should be automatically inserted last           *
*  with an optional retention status.                                       *
*****************************************************************************
SET NAME IS CONSISTS_OF_MI
    OWNER IS RESOURCE_MACHINE_TYPE
      MEMBER IS MACHINE_INSTANCE
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************************
*  The HAS_SHORT_TERM_PROFILE set connects the RESOURCE_MACHINE_TYPE        *
*  record with the RESOURCE_MACH_TYPE_LOAO_PROFILE record.  The set         *
*  is required to facilitate economic access to multiple planning           *
*  period date for short term balancing functions. The                      *
*  RESOURCE_MACHINE_TYPE_LOAD_PROFILE records should be automatic           *
*  inserted next with an optional rtention status.                          *
*****************************************************************************
SET NAME IS HAS_SHORT_TERM_PROFILE
    OWNER IS RESOURCE_MACHINE_TYPE
      MEMBER IS RESOURCE_MACH_TYPE_LOAD_PROFILE
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS NEXT
```

```
*****************************************************************************
*  The HAS_PROBS_LOADING set connects the RESOURCE_MACHINE_TYPE record      *
*  with the LOAD_UNIT record.   The set is required to identify all         *
*  load units that could not be loaded during short term loading.           *
*  The LOAD_UNIT records should be inserted manually sorted on              *
*  priority code with an optional retention status.                         *
*****************************************************************************
SET NAME IS HAS_PROBS_LOADING
    OWNER IS RESOURCE_MACHINE_TYPE
      MEMBER IS LOAD_UNIT
       INSERTION IS MANUAL
       RETENTION IS OPTIONAL
       ORDER IS SORTED BY
              ASCENDING LU_PRIORITY_CODE_1
              DESCENDING LU_PRIORITY_CODE_2
              DUPLICATES ARE LAST
*****************************************************************************
*  The HAS_CI set connects the RESOURCE_MACHINE_TYPE record with the        *
*  CAPACITY_INTERVAL record.  For each resource machine type a capacity     *
*  interval is identified.  The CAPACITY-INTERVAL records are inserted      *
*  manually with an optional retention status and sorted by beginning       *
*  capacity interval.                                                       *
*****************************************************************************
SET NAME IS HAS_CI
    OWNER IS RESOURCE_MACHINE_TYPE
      MEMBER IS CAPACITY_INTERVAL
       INSERTION IS MANUAL
       RETENTION IS OPTIONAL
       OROER IS SORTED BY
                  ASCENDING CI_BEGIN_INTERVAL_ID
                  DUPLICATES ARE LAST
*****************************************************************************
*  The HAS_RMTH set connects the RESOURCE_MACHINE_TYPE                      *
*  record with the RESOURCE_MACH_TYPE_HISTORY record.  A number             *
*  of history items are maintained for each resource machine type.  The     *
*  RESOURCE_MACH_TYPE_HISTORY records are inserted automatically            *
*  with an optional retention status and an order of last.                  *
*****************************************************************************
SET NAME IS HAS_RMTH
    OWNER IS RESOURCE_MACHINE_TYPE
      MEMBER IS RESOURCE_MACH_TYPE_HISTORY
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************************
*  The HAS_RMTH_DETAIL set connects the RESOURCE_MACH_TYPE_HISTORY          *
*  record with the ROUTING_OPERATION_HISTORY_SAMPL record.  This set        *
*  provides a means to identify detail of operations performed on a         *
*  resource machine type.  The ROUTING_OPERATION_HISTORY_SAMPL records      *
*  inserted manually with an optional retention status and an order of      *
*  last.                                                                    *
*****************************************************************************
```

```
SET NAME IS HAS_RMTH_DETAIL
    OWNER IS RESOURCE_MACH_TYPE_HISTORY
      MEMBER IS ROUTING_OPERATION_HISTORY_SAMPL
       INSERTION IS MANUAL
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************************
*  The IS_PROFILED_BY set connects the MACHINE_INSTANCE record with         *
*  MACHINE_INSTANCE_PLANNING_PERIOD record.  Each unique machine is         *
*  available during specified planning periods.  The                        *
*  MACHINE_INSTANCE_PLANNING_PERIOD records should be automatically         *
*  inserted next with an optional retention status.                         *
*****************************************************************************
SET NAME IS IS_PROFILED_BY
    OWNER IS MACHINE_INSTANCE
      MEMBER IS MACH_INSTANCE_PLANNING_PERIOD
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS NEXT
*****************************************************************************
*  The ALSO_HAS_CI connects the MACHINE_INSTANCE record with the            *
*  CAPACITY_INTERVAL record.  It identifies the capacity intervals for      *
*  a machine instannce.  The CAPACITY_INTERVAL records are inserted         *
*  manually with an optional retention status and sorted by beginning       *
*  interval period identification.                                          *
*****************************************************************************
SET NAME IS ALSO_HAS_CI
    OWNER IS MACHINE_INSTANCE
      MEMBER IS CAPACITY_INTERVAL
       INSERTION IS MANUAL
       RETENTION IS OPTIONAL
       ORDER IS SORTED BY
                  ASCENDING CI_BEGIN_INTERVAL_ID
                  DUPLICATES ARE LAST
*****************************************************************************
*  The HAS_ROUTING set connects the PART record to the PLANNED_ROUTING      *
*  record.  The PLANNED_ROUTING records should be inserted in               *
*  order of ascending PL_ROUTING_NUM.                                       *
*****************************************************************************
SET NAME IS HAS_ROUTING
    OWNER IS PART
   MEMBER IS PLANNED_ROUTING
   INSERTION IS AUTOMATIC
   RETENTION IS FIXED
   ORDER IS SORTED BY
              ASCENDING PL_ROUTING_NUM
         DUPLICATES ARE NOT ALLOWED
*****************************************************************************
*  The HAS_BEEN_ORDERED_IN set connects the PART record with the            *
*  PRODUCTION_REQUIREMENT record.  This set identifies the part             *
*  that is called out by a production requirement.  The                     *
*  PRODUCTION_REQUIREMENT records should be inserted automatic last         *
*  with an optional retention status.                                       *
*****************************************************************************
```

```
SET NAME IS HAS_BEEN_ORDERED_IN
    OWNER IS PART
      MEMBER IS PRODUCTION_REQUIREMENT
      INSERTION IS AUTOMATIC
      RETENTION IS OPTIONAL
      ORDER IS LAST
*****************************************************************
*  The HAS_PART_HISTORY set connects the PART record with the   *
*  PART_HISTORICAL_PERFORMANCE.  Historical performance is maintained *
*  for each part in the database.  The PART_HISTORY             *
*  records are inserted automatically with an optional retention status *
*  and an order of last.                                        *
*****************************************************************
SET NAME IS HAS_PART_HISTORY
    OWNER IS PART
      MEMBER IS PART_HISTORY
      INSERTION IS AUTOMATIC
      RETENTION IS OPTIONAL
      ORDER IS LAST
*****************************************************************
*  The HAS_PHS set connects the PART_HISTORY record with the    *
*  PART_HISTORY_SAMPLE.  A sample of the latest history is maintained in *
*  these reccords.  The PART_HISTORY_SAMPLE records are automatically *
*  inserted last with an optional retention status.             *
*****************************************************************
SET NAME IS HAS_PHS
    OWNER IS PART_HISTORY
      MEMBER IS PART_HISTORY_SAMPLE
      INSERTION IS AUTOMATIC
      RETENTION IS OPTIONAL
      ORDER IS LAST
*****************************************************************
*  The IS_COMPOSED_OF set connects the PLANNED_ROUTING record to *
*  all of its associated ROUTING_OPERATION records.  The        *
*  ROUTING_OPERATION records should be inserted in order of     *
*  ascending RO_OPERATION_NUM.                                  *
*****************************************************************
SET NAME IS IS_COMPOSED_OF
    OWNER IS PLANNED_ROUTING
         MEMBER IS ROUTING_OPERATION
   INSERTION IS AUTOMATIC
   RETENTION IS FIXED
   ORDER IS SORTED BY
         ASCENDING RO_OPER_NUM
         DUPLICATES ARE NOT ALLOWED
*****************************************************************
*  The MAY_BE_REPLACED_BY set connects the ROUTING_OPERATION record to *
*  any ALTERNATE_OPERATION records which are defined.  ALTERNATE_ *
*  OPERATION records should be inserted in order of ascending   *
*  AO_ALT_OPER_NUM.                                             *
*****************************************************************
```

```
SET NAME IS MAY_BE_REPLACED_BY
    OWNER IS ROUTING_OPERATION
   MEMBER IS ALTERNATE_OPERATION
   INSERTION IS AUTOMATIC
   RETENTION IS FIXED
   ORDER IS SORTED BY
         ASCENDING AO_ALT_OPER_NUM
         DUPLICATES ARE NOT ALLOWED
*****************************************************************
*  The HAS_LU set connects the ROUTING_OPERATION record with the  *
*  LOAD_UNIT record.  Each routing operation                      *
*  is associated with a load unit.  The LOAD_UNIT record is inserted *
*  manually last with an optional retention status.               *
*****************************************************************
SET NAME IS HAS_LU
    OWNER IS ROUTING_OPERATION
      MEMBER IS LOAD_UNIT
       INSERTION IS MANUAL
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************
*  The HAS_ROH set connects the ROUTING_OPERATION record with the *
*  ROUTING_OPERATION_HISTORY record.  Performance calculations are *
*  retained for each routing operation in the database.  The      *
*  ROUTING_OPERATION_HISTORY records are inserted automatically with *
*  an optional retention status and an order of last.             *
*****************************************************************
SET NAME IS HAS_ROH
    OWNER IS ROUTING_OPERATION
      MEMBER IS ROUTING_OPERATION_HISTORY
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************
*  The HAS_ROHS set connects the ROUTING_OPERATION_HISTORY record with *
*  ROUTING_OPERATION_HISTORY_SAMPL record.                        *
*  ROUTING_OPERATION_HISTORY_SAMPL records are inserted automatically *
*  last with an optional retention status.                        *
*****************************************************************
SET NAME IS HAS_ROHS
    OWNER IS ROUTING_OPERATION_HISTORY
      MEMBER IS ROUTING_OPERATION_HISTORY_SAMPL
       INSERTION IS MANUAL
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************
*  The MAY_ALSO_REQUIRE set connects the ALTERNATE_OPERATION record to *
*  any CONTINGENCY_OPERATION records which are defined for the    *
*  ALTERNATE_OPERATION record.  The CONTINGENCY_OPERATION records *
*  should be inserted in order of ascending CO_CONT_OPER_NUM.     *
*****************************************************************
```

```
SET NAME IS MAY_ALSO_REQUIRE
    OWNER IS ALTERNATE_OPERATION
   MEMBER IS CONTINGENCY_OPERATION
   INSERTION IS AUTOMATIC
   RETENTION IS FIXED
   ORDER IS SORTED BY
         ASCENDING CO_CONT_OPER_NUM
         DUPLICATES ARE NOT ALLOWED
*****************************************************************************
*  The CONSISTS_OF_LU set connects the PRODUCTION_REQUIREMENT record        *
*  with the LOAD_UNIT record.  Production_requirements are assigned         *
*  to given resource with the production requirement operations             *
*  translated to load units with consecutive operations for the same        *
*  machine type summarized to one load unit.  The LOAD_UNIT records         *
*  should be automatically inserted next with a fixed retention             *
*  status.                                                                  *
*****************************************************************************
SET NAME IS CONSISTS_OF_LU
    OWNER IS PRODUCTION_REQUIREMENT
      MEMBER IS LOAD_UNIT
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS NEXT
*****************************************************************************
*  The CONSOLIDATED_LU set connects the PRODUCTION_REQUIREMENT record       *
*  with the LOAD_UNIT record.  All load units that has been created by      *
*  by combining routing operations are members of this set.                 *
*****************************************************************************
SET NAME IS CONSOLIDATED_LU
    OWNER IS PRODUCTION_REQUIREMENT
      MEMBER IS LOAD_UNIT
       INSERTION IS MANUAL
       RETENTION IS OPTIONAL
       ORDER IS NEXT
*****************************************************************************
*  The HAS_UNPROCESSED_CHANGE set connects the PRODUCTION_REQUIREMENT       *
*  with the PR_CHANGE_REQUEST record.  This set identifies all             *
*  production requirements that have had order quantity changes            *
*  down loaded from the MRP system.  PR_CHANGE_REQUEST records are         *
*  inserted automatically with an optional retention status                *
*  and an order last.                                                      *
*****************************************************************************
SET NAME IS HAS_UNPROCESSED_REQUESTS
    OWNER IS PRODUCTION_REQUIREMENT
      MEMBER IS PR_CHANGE_REQUEST
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED
       ORDER IS LAST
*****************************************************************************
*  The CAN_BE_DESCRIBED_BY set is provided to accommodate access to        *
*  the PRODUCTION_REQUIRMENT record.  PR_STATE_RELATION records are        *
*  inserted automatically with an optional retention status.  The          *
*  order is last.                                                          *
*****************************************************************************
```

```
SET NAME IS CAN_BE_DESCRIBED_BY
    OWNER IS PRODUCTION_REQUIREMENT
      MEMBER IS PR_STATE_RELATION
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED
       ORDER IS LAST
*****************************************************************************
*  The IS_LOADED_WITH set connects the MACHINE_INSTANCE_PLANNING_PERIOD *
*  record with the LOAD_UNIT record and the LOAD_UNIT_SEGMENT record.   *
*  It provides the means to identify machine load within a given        *
*  planning period.  The LOAD_UNIT and LOAD_UNIT_SEGEMENT records       *
*  should be manually inserted next in the set with an optional         *
*  retention status.                                                    *
*****************************************************************************
SET NAME IS IS_LOADED_WITH
    OWNER IS MACH_INSTANCE_PLANNING_PERIOD
      MEMBER IS LOAD_UNIT
       INSERTION IS MANUAL
       RETENTION IS OPTIONAL
       ORDER IS NEXT
       MEMBER IS LOAD_UNIT_SEGMENT
       INSERTION IS MANUAL
       RETENTION IS OPTIONAL
       ORDER IS NEXT
*****************************************************************************
* The IS_BROKEN_INTO set connects the LOAD_UNIT record and the          *
* LOAD_UNIT_SEGMENT record.  It used to identify which load unit       *
* segments are associated with a load unit.  The LOAD_UNIT_SEGMENT     *
* record should be automatically inserted next into the set with an    *
* fixed retention status.                                              *
*****************************************************************************
SET NAME IS IS_BROKEN_INTO
    OWNER IS LOAD_UNIT
      MEMBER IS LOAD_UNIT_SEGMENT
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED
       ORDER IS NEXT
*****************************************************************************
*  The HAS_LOAP set connects the LOAD_UNIT record with the              *
*  LOAD_UNIT_ACTUAL_PERFORMANCE record.  This set provides the means    *
*  to retain actual production data received from the shop floor control*
*  system.  The LOAD_UNIT_ACTUAL_PERFORMANCE records are inserted       *
*  manually with an optional retention status and an order of last      *
*****************************************************************************
SET NAME IS HAS_LOAP
    OWNER IS LOAD_UNIT
      MEMBER IS LOAD_UNIT_ACTUAL_PERFORMANCE
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************************
*  The IS_CHARACTERIZED_BY set connects the LOAD_UNIT record with the   *
*  LU_STATE_RELATION record.  LU_STATE_RELATION records are inserted    *
*  automatically last with an optional retention status.                *
*****************************************************************************
```

```
SET NAME IS IS_CHARACTERIZED_BY
    OWNER IS LOAD_UNIT
      MEMBER IS LU_STATE_RELATION
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************************
*  The MAY_BE_SPECIFIED_BY set connects the PLANNING_PERIOD record with *
*  the M_DAY record.  Each calendar day may be represented by an        *
*  available work day (mday).  The M_DAY should be inserted automatic   *
*  last with an optional retention status.                              *
*****************************************************************************
SET NAME IS MAY_BE_SPECIFIED_BY
    OWNER IS PLANNING_PERIOD
      MEMBER IS M_DAY
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************************
*  The INCLUDES_PR set connects the PR_STATE record with the            *
*  PR_STATE_RELATION record.  The purpose of this set is to accommodate *
*  access to production requirements that are in different states       *
*  (status).  Each PR_STATE_RELATION record is inserted automatically   *
*  with an optional retention period and an order of last.              *
*****************************************************************************
SET NAME IS INCLUDES_PR
    OWNER IS PR_STATE
      MEMBER IS PR_STATE_RELATION
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************************
*  The HAS_MOVE_HISTORY set connects the MOVE_TIME record with the      *
*  MOVE_TIME_HISTORY record.  Each move time entry in the database has  *
*  history retained.  The MOVE_HISTORY record is inserted               *
*  automatically with an optional retention status and an order of last.*
*****************************************************************************
SET NAME IS HAS_MOVE_HISTORY
    OWNER IS MOVE_TIME
      MEMBER IS MOVE_HISTORY
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************************
*  The HAS_MHS set connects the MOVE_HISTORY record with the            *
*  MOVE_HISTORY_SAMPLE record.  The MOVE_HISTORY_SAMPLE record is inserted*
*  automatically last with an optional retention status.                *
*****************************************************************************
SET NAME IS HAS_MHS
    OWNER IS MOVE_HISTORY
      MEMBER IS MOVE_HISTORY_SAMPLE
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS LAST
```

```
*****************************************************************************
*  The APPEARS_AS set connects the LU_STATE  record with the                *
*  LU_STATE_RELATION record.  Each operation or load unit that has been     *
*  received from the shop floor control system with a complete status is    *
*  connected to this set.  The LU_STATE_RELATION records are inserted       *
*  automatically with a retention status of optional and an order of last.  *
*****************************************************************************
SET NAME IS APPEARS_AS
    OWNER IS LU_STATE
      MEMBER IS LU_STATE_RELATION
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS LAST
*****************************************************************************
*  The HAS_ELIGIBLE_LTLU set connects the LT_PRODUCTION_REQUIREMENT         *
*  record with the LT_LOAD_UNIT record.  LT_LOAD_UNIT records are           *
*  manually with an optional retention status. Order is next.               *
*****************************************************************************
SET NAME IS HAS_ELIGIBLE_LTLU
    OWNER IS LT_PRODUCTION_REQUIREMENT
      MEMBER IS LT_LOAD_UNIT
       INSERTION IS MANUAL
       RETENTION IS OPTIONAL
       ORDER IS NEXT
*****************************************************************************
*  The HAS_TEMP_LTLU set connects the LT_PRODUCTION_REQUIREMENT record      *
*  with the TEMP_LTLU record.  TEMP_LTLU records are inserted               *
*  automatically with an optional retention status and an order of last.    *
*****************************************************************************
SET NAME IS HAS_TEMP_LTLU
    OWNER IS LT_PRODUCTION_REQUIREMENT
      MEMBER IS TEMP_LTLU
       INSERTION IS MANUAL
       ORDER IS LAST
*****************************************************************************
*  The HAS_LT_RMT_PROFILE set connects the LT_RESOURCE_MACHINE_TYPE         *
*  with the RMT_PLANNING_PERIOD record.  The RMT_PLANNING_PERIOD records    *
*  are inserted automatically with a fixed retention status.  The order     *
*  is next.                                                                 *
*****************************************************************************
SET NAME IS HAS_LT_RMT_PROFILE
    OWNER IS LT_RESOURCE_MACHINE_TYPE
      MEMBER IS RMT_PLANNING_PERIOD
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED
       ORDER IS NEXT
*****************************************************************************
*  The IS_PROFILED_BY_LTRMTLP set connects the LT_RESOURCE_MACHINE_TYPE     *
*  record with the LT_RES_MACH_TYP_LOAD_PROFILE.  These records are         *
*  inserted automatically with a fixed retention status, order next.        *
*****************************************************************************
SET NAME IS IS_PROFILED_BY_LTRMTLP
    OWNER IS LT_RESOURCE_MACHINE_TYPE
      MEMBER IS LT_RES_MACH_TYP_LOAD_PROFILE
       INSERTION IS AUTOMATIC
       RETENTION IS FIXED
       ORDER IS NEXT
```

```
*************************************************************************
*  The IS_COMPOSED_OF_LTLU_SEG set connects the RMT_PLANNING_PERIOD     *
*  record with the LT_LOAD_UNIT_SEGMENT.  The LT_LOAD_UNIT_SEGMENT     *
*  records are inserted manually with an optional retention status.    *
*  The order is sorted.                                                *
*************************************************************************
SET NAME IS IS_COMPOSED_OF_LTLU_SEG
    OWNER IS RMT_PLANNING_PERIOD
      MEMBER IS LT_LOAD_UNIT_SEGMENT
       INSERTION IS MANUAL
       RETENTION IS OPTIONAL
       ORDER IS SORTED BY
             ASCENDING LTLUS_PRIORITY_CODE_1 LTLUS_PRIORITY_CODE_2
             OUPLICATES ARE ALLOWED
*************************************************************************
*  The IS_BROKEN_INTO_LTLU_SEGMENT  set connects the LT_LOAD_UNIT record *
*  with the LT_LOAD_UNIT_SEGMENT record.  Each load unit segment created *
*  is associated with the load unit it originated from.  The             *
*  LT_LOAD_UNIT_SEGMENT records are inserted automatically with a        *
*  retention status of fixed and an order of next.                       *
*************************************************************************
SET NAME IS IS_BROKEN_INTO_LTLU_SEGMENT
    OWNER IS LT_LOAD_UNIT
      MEMBER IS LT_LOAD_UNIT_SEGMENT
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS NEXT
*************************************************************************
*  The IS_MAOE_UP_OF set connects the TRANSACTION record with the       *
*  ACTIVITY record.  Each transaction consists of one or more activities.*
*  The ACTIVITY records are inserted automaitcally with an optional     *
*  retention inserted manually and an order of next.                    *
*************************************************************************
SET NAME IS IS_MADE_UP_OF
    OWNER IS TRANSACTION
      MEMBER IS ACTIVITY
       INSERTION IS AUTOMATIC
       RETENTION IS OPTIONAL
       ORDER IS NEXT
*************************************************************************
*  The IS_A set connects the TRANSACTION record with the                *
*  PRIOR_TRANSACTION record.  PRIOR_TRANSACTION records are inserted    *
*  automatically with an optional retention status and an order of last.*
*************************************************************************
```

```
SET NAME IS IS_A
    OWNER IS TRANSACTION
      MEMBER IS PRIOR_TRANSACTION
      INSERTION IS AUTOMATIC
      RETENTION IS OPTIONAL
      ORDER IS LAST
*****************************************************************************
*  The IS_EXECUTED_AFTER set connects the TRANSACTION record with the       *
*  PRIOR_TRANSACTION record.  PRIOR_TRANSACTION records are inserted        *
*  automatically with an optional retention status and an order of last.    *
*****************************************************************************
SET NAME IS IS_EXECUTED_AFTER
    OWNER IS TRANSACTION
      MEMBER IS PRIOR_TRANSACTION
      INSERTION IS AUTOMATIC
      RETENTION IS OPTIONAL
      ORDER IS LAST
*****************************************************************************
*  The MAY_BE_PERFORMED_AS set connects the SUBPROCESS_ACTIVITY record      *
*  with the ACTIVITY record.  SUBPROCEES_ACTIVITY records are inserted      *
*  automatically with an optional retention and an order of last.           *
*****************************************************************************
SET NAME IS MAY_BE_PERFORMED_AS
    OWNER IS ACTIVITY
      MEMBER IS SUBPROCESS_ACTIVITY
      INSERTION IS AUTOMATIC
      RETENTION IS OPTIONAL
      ORDER IS LAST
```

APPENDIX C

PP&CS DATA-BASE STORAGE SCHEMA LISTING

```
*****************************************************************
*      STORAGE SCHEMA TOT_STR FOR TOTPPCS DATA BASE             *
*****************************************************************
STORAGE SCHEMA NAME IS TOT_STR FOR TOTPPCS SCHEMA
*   Storage schema version number :  9-DEC-1983 19:36:18.42 (1)
*   Schema version number :  9-DEC-1983 19:23:07.72 (1)

*   Storage area name is PROCPLN1
*   Storage area name is PROCPLN2
*   Storage area name is FACLOAO
*   Storage area name is CONFIG
*   Storage area name is FLARRAY
*   Storage area name is MIPPAREA
*   Storage area name is LTFLOAD
*   Storage area name is LTTEMP

RECORD NAME IS LEVEL
    PLACEMENT IS SCATTERED USING L_LEV_NUM
*   Dwner of sets  : CDNTAINS_R
*                    SEL_FOR_RELEASE
*   Member of sets : ALL_LEVEL
    ITEM L_LEV_NUM TYPE IS CHARACTER 2
    ITEM L_LEV_ID TYPE IS CHARACTER 8
    ITEM L_LEV_DPT_CD TYPE IS CHARACTER 8
    ITEM L_LEV_DESC TYPE IS CHARACTER 24

RECORO NAME IS RESDURCE
    PLACEMENT IS SCATTERED USING R_RES_IO
*   Owner of sets :  MAY_EXIST_AS
*                    HAS
*                    IS_RESPONSIBLE_FOR
*                    RELEASE_BY_OATE
*                    IS_ASSIGNED
*                    HAS_SHORT_TERM_LOAO
*                    HAS_PSUEOO_RELEASE
*                    CDNTAINS_RELEASE
*                    CDNTAINS_LLR
*                    IS_ALSD
*                    HAS_LT_RES_PROFILE
*   Member of sets : ALL_RESOURCE
*                    CONTAINS_R
*                    SEL_FOR_RELEASE
    ITEM R_RES_ID TYPE IS CHARACTER 8
    ITEM R_LEV_ID TYPE IS CHARACTER 8
    ITEM R_LEV_DPT_CD TYPE IS CHARACTER 8
    ITEM R_REL_LOAD_LDWER_LIM TYPE IS PACKED DECIMAL 8
    ITEM R_REL_LOAD TYPE IS PACKEO OECIMAL 10 -2
    ITEM R_REL_LOAD_UP_LIM TYPE IS PACKED DECIMAL 8
    ITEM R_INWORK_DATE_REL_INT TYPE IS PACKEO DECIMAL 8
    ITEM R_AUTO_REL_IND TYPE IS CHARACTER 1
    ITEM R_TOT_ACCUM_WORK TYPE IS PACKED DECIMAL 10 -2
    ITEM R_RES_LOAD_UNIT_HOURS TYPE IS PACKED DECIMAL 10 -2
    ITEM R_OISP LOAD TYPE IS PACKED DECIMAL 10 -2
    ITEM R_CURRENT_LOAD TYPE IS PACKEO OECIMAL 10 -2
    ITEM R_WORK_TO_BE_RELEASED TYPE IS PACKED DECIMAL 8
    ITEM R_ACT_REL_OTY TYPE IS PACKEO DECIMAL 10 -2
    ITEM R_RES_OESC TYPE IS CHARACTER 16
```

```
    ITEM R_PROD_RATE_TRACKING_SIG TYPE IS CHARACTER 1
    ITEM R_RES_EFFEC TYPE IS PACKED DECIMAL 2
    ITEM R_RES_EFFIC TYPE IS PACKED DECIMAL 2
    ITEM R_RES_CAP_UTIL TYPE IS PACKED DECIMAL 2
    ITEM R_RES_SETUP_EFFIC TYPE IS PACKED DECIMAL 2
    ITEM R_RES_TOT_SETUP_LOSS_RATE TYPE IS PACKED DECIMAL 2
    ITEM R_LEV_NUM TYPE IS CHARACTER 2
    ITEM R_OVERLOADED_PD_FLAG TYPE IS CHARACTER 1

RECORD NAME IS LOWER_LEVEL_RESOURCE
    PLACEMENT IS CLUSTERED VIA CONTAINS_LLR
*   Member of sets : CONTAINS_LLR
*                    IS_ALSO
    ITEM LLR_RES_ID TYPE IS CHARACTER 8
    ITEM LLR_LL_RES_ID TYPE IS CHARACTER 8

RECORD NAME IS RESOURCE_PLANNING_PERIOD
    PLACEMENT IS CLUSTERED VIA HAS_LT_RES_PROFILE
*   Member of sets : ALL_RESOURCE_PLANNING_PERIOD
*                    HAS_LT_RES_PROFILE
    ITEM RPP_RESOURCE_ID TYPE IS CHARACTER 8
    ITEM RPP_PLN_PERIOD_ID TYPE IS CHARACTER 10
    ITEM RPP_TOTAL_CAPACITY_HRS TYPE IS PACKED DECIMAL 8 -2
    ITEM RPP_TOTAL_LOAD_HRS TYPE IS PACKED DECIMAL 8 -2
    ITEM RPP_CUM_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM RPP_CUM_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS MACHINE_TYPE
    PLACEMENT IS SCATTERED USING MT_MACH_TYPE
*   Owner of sets :  IS_REPRESENTED_BY
*                    IS_USED_AS
*   Member of sets : ALL_MACHINE_TYPE
    ITEM MT_MACH_TYPE TYPE IS CHARACTER 8
    ITEM MT_MACH_TYPE_DESC TYPE IS CHARACTER 16

RECORD NAME IS RESOURCE_MACHINE_TYPE
    PLACEMENT IS CLUSTERED VIA ALL_RESOURCE_MACHINE_TYPE
*   Owner of sets :  CONSISTS_OF_MI
*                    HAS_SHORT_TERM_PROFILE
*                    HAS_PROBS_LOADING
*                    HAS_CI
*                    HAS_RMTH
*   Member of sets : ALL_RESOURCE_MACHINE_TYPE
*                    HAS
*                    IS_USED_AS
    ITEM RMT_RES_ID TYPE IS CHARACTER 8
    ITEM RMT_MACH_TYPE TYPE IS CHARACTER 8
    ITEM RMT_Q_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_EFFECT_RATE TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_Q_TIME_VAL_LIM TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_EFFIC TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_NUM_MACHINES TYPE IS PACKED DECIMAL 3
    ITEM RMT_Q_TIME_COMP_FACTOR TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_RATIO_RUN_SETUP TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_AVG_MACH_TYPE_EFFIC TYPE IS PACKED DECIMAL 2
    ITEM RMT_AVG_SETUP_EFFECT TYPE IS PACKED DECIMAL 2
    ITEM RMT_AVG_SETUP_LOSS_RATE TYPE IS PACKED DECIMAL 2
```

```
    ITEM RMT_AVG_MACH_TYPE_EFFEC TYPE IS PACKED DECIMAL 2
    ITEM RMT_RUN_TIME_VAL_LIM TYPE IS PACKED DECIMAL 8
    ITEM RMT_SETUP_TIME_VAL_LIM TYPE IS PACKED DECIMAL 8
    ITEM RMT_RES_UTIL_VAL_LIM TYPE IS PACKED DECIMAL 8

RECORD NAME IS MACHINE_INSTANCE
    PLACEMENT IS CLUSTERED VIA MAY_EXIST_AS
*   Owner of sets : IS_PROFILED_BY
*                   ALSO_HAS_CI
*   Member of sets : MAY_EXIST_AS
*                   IS_REPRESENTED_BY
*                   CONSISTS_OF_MI
    ITEM MI_MACH_SER_NUM TYPE IS CHARACTER 8
    ITEM MI_MACH_RES_ID TYPE IS CHARACTER 8

RECORD NAME IS PART
    PLACEMENT IS SCATTERED USING P_PART_NUM
*   Owner of sets :  HAS_ROUTING
*                   HAS_BEEN_ORDERED_IN
*                   HAS_PART_HISTORY
*   Member of sets : ALL_PART
    ITEM P_PART_NUM TYPE IS CHARACTER 24
    ITEM P_PART_DESC TYPE IS CHARACTER 32
    ITEM P_OVER_UNDER_QTY TYPE IS PACKED DECIMAL 8
    ITEM P_PRIME_RESP TYPE IS CHARACTER 8
    ITEM P_SCRAP_VAR_PART TYPE IS PACKED DECIMAL 8

RECORD NAME IS PLANNED_ROUTING
    PLACEMENT IS CLUSTERED VIA HAS_ROUTING
*   Owner of sets :  IS_COMPOSED_OF
*   Member of sets : HAS_ROUTING
    ITEM PL_ROUTING_NUM TYPE IS PACKED DECIMAL 2
    ITEM PL_EFFECTIVITY_DATE TYPE IS CHARACTER 10
    ITEM PL_REVISION_DATE TYPE IS CHARACTER 10
    ITEM PL_REVISION_NUM TYPE IS PACKED DECIMAL 4
    ITEM PL_RAW_MATL_ITEM_ID TYPE IS CHARACTER 24
    ITEM PL_RAW_MATL_DESC TYPE IS CHARACTER 32
    ITEM PL_RAW_MATL_QTY_PER TYPE IS PACKED DECIMAL 2
    ITEM PL_RESP_DEPT TYPE IS CHARACTER 8
    ITEM PL_ORIGIN_LOCATION TYPE IS CHARACTER 8

RECORD NAME IS ROUTING_OPERATION
    PLACEMENT IS CLUSTERED VIA IS_COMPOSED_OF
*   Owner of sets :  MAY_BE_REPLACED_BY
*                   HAS_LU
*                   HAS_ROH
*   Member of sets : IS_COMPOSED_OF
    ITEM RO_OPER_NUM TYPE IS PACKED DECIMAL 4
    ITEM RO_OPER_DESC TYPE IS CHARACTER 15
    ITEM RO_DEPT TYPE IS CHARACTER 8
    ITEM RO_STD_SETUP_HOURS TYPE IS PACKED DECIMAL 8 -3
    ITEM RO_STD_HOURS_PER_OPER TYPE IS PACKED DECIMAL 8 -3
    ITEM RO_PER_CODE TYPE IS PACKED DECIMAL 1
    ITEM RO_REQED_TOOL_KIT_ID TYPE IS CHARACTER 8
    ITEM RO_NUM_TOOL_KITS_AVAIL TYPE IS PACKED DECIMAL 2
    ITEM RO_SKILL_REQMT TYPE IS CHARACTER 8
    ITEM RO_SKILL_DESC TYPE IS CHARACTER 15
```

```
    ITEM RO_NUM_SKILLED_EMP_NEEDED TYPE IS PACKED DECIMAL 2
    ITEM RO_PROCESS_SPEC TYPE IS CHARACTER 80
*       Occurs 4 times

RECORD NAME IS ALTERNATE_OPERATION
    PLACEMENT IS CLUSTERED VIA MAY_BE_REPLACED_BY
*   Owner of sets :  MAY_ALSO_REQUIRE
*   Member of sets : MAY_BE_REPLACED_BY
    ITEM AO_ALT_OPER_NUM TYPE IS CHARACTER 4
    ITEM AO_OPER_OESC TYPE IS CHARACTER 15
    ITEM AO_OEPT TYPE IS CHARACTER 8
    ITEM AO_MACH_TYPE TYPE IS CHARACTER 8
    ITEM AO_STD_SETUP_HOURS TYPE IS PACKED DECIMAL 8 -3
    ITEM AO_STD_HOURS_PER_OPER TYPE IS PACKED DECIMAL 8 -3
    ITEM AO_PER_CODE TYPE IS PACKED DECIMAL 1
    ITEM AO_REQED_TOOL_KIT_ID TYPE IS CHARACTER 8
    ITEM AO_NUM_TOOL_KITS_AVAIL TYPE IS PACKED DECIMAL 2
    ITEM AO_SKILL_REQMT TYPE IS CHARACTER 8
    ITEM AO_SKILL_DESC TYPE IS CHARACTER 15
    ITEM AO_NUM_SKILLED_EMP_NEEDED TYPE IS PACKED DECIMAL 2
    ITEM AO_PROCESS_SPEC TYPE IS CHARACTER 80
*       Occurs 4 times

RECORD NAME IS CONTINGENCY_OPERATION
    PLACEMENT IS CLUSTERED VIA MAY_ALSO_REQUIRE
*   Member of sets : MAY_ALSO_REQUIRE
    ITEM CO_CONT_OPER_NUM TYPE IS CHARACTER 4
    ITEM CO_OPER_DESC TYPE IS CHARACTER 15
    ITEM CO_DEPT TYPE IS CHARACTER 8
    ITEM CO_MACH_TYPE TYPE IS CHARACTER 8
    ITEM CO_STD_SETUP_HOURS TYPE IS PACKED DECIMAL 8 -3
    ITEM CO_STD_HOURS_PER_OPER TYPE IS PACKED OECIMAL 8 -3
    ITEM CO_PER_CODE TYPE IS PACKED DECIMAL 1
    ITEM CO_REQED_TOOL_KIT_ID TYPE IS CHARACTER 8
    ITEM CO_NUM_TOOL_KITS_AVAIL TYPE IS PACKED DECIMAL 2
    ITEM CO_SKILL_REQMT TYPE IS CHARACTER 8
    ITEM CO_SKILL_DESC TYPE IS CHARACTER 15
    ITEM CO_NUM_SKILLED_EMP_NEEDED TYPE IS PACKED DECIMAL 2
    ITEM CO_PROCESS_SPEC TYPE IS CHARACTER 80
*       Occurs 4 times

RECORD NAME IS PRODUCTIDN_REQUIREMENT
    PLACEMENT IS CLUSTERED VIA ALL_PRODUCTION_REQUIREMENT
*   Owner of sets :  CONSISTS_OF_LU
*                    CONSOLIDATED_LU
*                    HAS_UNPROCESSEO_REQUESTS
*                    CAN_BE_DESCRIBED_BY
*   Member of sets : ALL_PRODUCTION_REQUIREMENT
*                    IS_RESPONSIBLE_FOR
*                    RELEASE_BY_DATE
*                    IS_ASSIGNED
*                    HAS_SHORT_TERM_LOAD
*                    HAS_PSUEDO_RELEASE
*                    CONTAINS_RELEASE
*                    HAS_BEEN_ORDERED_IN
    ITEM PR_ORD_NUM TYPE IS CHARACTER 12
    ITEM PR_?ART_NUM TYPE IS CHARACTER 24
```

```
    ITEM PR_RES_ID TYPE IS CHARACTER 8
    ITEM PR_ORD_QTY TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_REQUIRED_DATE TYPE IS CHARACTER 10
    ITEM PR_STATUS_CODE TYPE IS CHARACTER 8
    ITEM PR_NO_ROUTING_FLAG TYPE IS CHARACTER 1
    ITEM PR_SCHED_PROB_FLAG TYPE IS CHARACTER 1
    ITEM PR_EARL_START_DATE TYPE IS CHARACTER 10
    ITEM PR_ORD_REV_CODE TYPE IS PACKED DECIMAL 2
    ITEM PR_PRIORITY_CODE_1 TYPE IS CHARACTER 8
    ITEM PR_PRIORITY_CODE_2 TYPE IS CHARACTER 8
    ITEM PR_EXPECTED_REL_DATE TYPE IS CHARACTER 10
    ITEM PR_REVISED_ORD_QTY TYPE IS PACKED DECIMAL 8
    ITEM PR_ACT_REL_DATE TYPE IS CHARACTER 10
    ITEM PR_PLANNED_ORD_QTY TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_SPAN_TIME TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_SUM_RUN_SETUP_TIME TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_CALC_EAR_ST_DT TYPE IS CHARACTER 10

RECORD NAME IS RESOURCE_MACH_TYPE_LOAD_PROFILE
    PLACEMENT IS CLUSTERED VIA HAS_SHORT_TERM_PROFILE
*   Member of sets : HAS_SHORT_TERM_PROFILE
    ITEM RMTLP_RES_ID TYPE IS CHARACTER 8
    ITEM RMTLP_MACH_TYPE TYPE IS CHARACTER 8
    ITEM RMTLP_NUM_MACH TYPE IS PACKED DECIMAL 3
    ITEM RMTLP_NUM_PLN_PERIOD TYPE IS PACKED DECIMAL 3
    ITEM RMTLP_MACH_NO TYPE IS CHARACTER 8
*       Occurs 10 times
    ITEM RMTLP_EXCESS_ARRAY TYPE IS PACKED DECIMAL 6 -2
*       Occurs 400 times

RECORD NAME IS MACH_INSTANCE_PLANNING_PERIOD
    PLACEMENT IS CLUSTERED VIA ALL_MACH_INSTANCE_PLAN_PERIOD
*   Owner of sets :  IS_LOADED_WITH
*   Member of sets : ALL_MACH_INSTANCE_PLAN_PERIOD
*                    IS_PROFILED_BY
    ITEM MIPP_SER_NUM TYPE IS CHARACTER 8
    ITEM MIPP_PLN_PERIOD_SEQ_NO TYPE IS PACKED DECIMAL 3
    ITEM MIPP_RES_ID TYPE IS CHARACTER 8
    ITEM MIPP_MACH_TYPE TYPE IS CHARACTER 8
    ITEM MIPP_PLN_PERIOD_ID TYPE IS CHARACTER 10
    ITEM MIPP_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM MIPP_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS LOAD_UNIT
    PLACEMENT IS CLUSTERED VIA CONSISTS_OF_LU
*   Owner of sets :  IS_BROKEN_INTO
*                    HAS_LOAP
*                    IS_CHARACTERIZED_BY
*   Member of sets : HAS_PROBS_LOADING
*                    HAS_L'I
*                    CONS.STS_OF_LU
*                    CONSOLIDATED_LU
*                    IS_LOADED_WITH
    ITEM LU_ORD_NUM TYPE IS CHARACTER 12
    ITEM LU_BEGIN_OPER_NUM TYPE IS CHARACTER 4
    ITEM LU_END_OPER_NUM TYPE IS CHARACTER 4
    ITEM LU_EARL_ST_DT TYPE IS CHARACTER 10
```

```
        ITEM LU_LATE_ST_DT TYPE IS CHARACTER 10
        ITEM LU_EARL_COMPL DT TYPE IS CHARACTER 10
        ITEM LU_REQUIRED_DATE TYPE IS CHARACTER 10
        ITEM LU_PRIORITY_CODE_1 TYPE IS CHARACTER 8
        ITEM LU_PRIORITY_CODE_2 TYPE IS CHARACTER 8
        ITEM LU_SLACK_TIME TYPE IS PACKED DECIMAL 6 -2
        ITEM LU_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
        ITEM LU_QUEUE_TIME TYPE IS PACKED DECIMAL 6 -2
        ITEM LU_SETUP_TIME TYPE IS PACKED DECIMAL 6 -2
        ITEM LU_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 6 -2
        ITEM LU_COMPRES_FLAG TYPE IS CHARACTER 1
        ITEM LU_RES_ID TYPE IS CHARACTER 8
        ITEM LU_MACH_TYPE TYPE IS CHARACTER 8
        ITEM LU_STATUS TYPE IS CHARACTER 8
        ITEM LU_TOT_NUM_SEG TYPE IS PACKED DECIMAL 2
        ITEM LU_MOD_FLAG TYPE IS CHARACTER 1
        ITEM LU_PREV_RES TYPE IS CHARACTER 8
        ITEM LU_PREV_MACH_TYPE TYPE IS CHARACTER 8
        ITEM LU_SLACK_TIME_USED_TO_MOVE TYPE IS PACKED DECIMAL 6 -2
        ITEM LU_SPEC_START_DATE TYPE IS CHARACTER 10
        ITEM LU_SPEC_COMP_DATE TYPE IS CHARACTER 10
        ITEM LU_CALC_ST_DT TYPE IS CHARACTER 10
        ITEM LU_SEQUENCE_NUM TYPE IS PACKED DECIMAL 4
        ITEM LU_ALT_OPER_FLAG TYPE IS CHARACTER 1
        ITEM LU_ALT_OPER_NUM TYPE IS CHARACTER 4
        ITEM LU_COMP_O_TIME TYPE IS PACKED DECIMAL 6 -2
        ITEM LU_COMP_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
        ITEM LU_OPER_SPAN_TIME TYPE IS PACKED DECIMAL 6 -2
        ITEM LU_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
        ITEM LU_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
        ITEM LU_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2

    RECORD NAME IS LOAD_UNIT_SEGMENT
        PLACEMENT IS CLUSTERED VIA IS_BROKEN_INTO
    *   Member of sets :  IS_LOADED_WITH
    *                     IS_BROKEN_INTO
        ITEM LUS_ORD_NUM TYPE IS CHARACTER 12
        ITEM LUS_BEGIN_OPER_NUM TYPE IS CHARACTER 4
        ITEM LUS_END_OPER_NUM TYPE IS CHARACTER 4
        ITEM LUS_MULTI_PERIOD_FLAG TYPE IS CHARACTER 1
        ITEM LUS_SEG_NUM TYPE IS PACKED DECIMAL 2
        ITEM LUS_PARAL_PROC_FLAG TYPE IS CHARACTER 1
        ITEM LUS_MULTI_PARAL_PROC_FLAG TYPE IS CHARACTER 1
        ITEM LUS_LOAD_HRS TYPE IS PACKED DECIMAL 6 -2

    RECORD NAME IS TRANSACTION
        PLACEMENT IS CLUSTERED VIA ALL_TRANSACTION
    *   Owner of sets :   IS_MADE_UP_OF
    *                     IS_A
    *                     IS_EXECUTED_AFTER
    *   Member of sets :  ALL_TRANSACTION
        ITEM T_TRAN_ID TYPE IS CHARACTER 6
        ITEM T_BUSY_FLAG TYPE IS CHARACTER 1
        ITEM T_TRAN_DESC TYPE IS CHARACTER 40
        ITEM T_USER_ID TYPE IS CHARACTER 12
        ITEM T_START_DATE TYPE IS CHARACTER 10
        ITEM T_START_TIME TYPE IS CHARACTER 8
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    ITEM T_ENO_DATE TYPE IS CHARACTER 10
    ITEM T_END_TIME TYPE IS CHARACTER 8
    ITEM T_INFO_BLOCK TYPE IS CHARACTER 250

RECORD NAME IS PRIOR_TRANSACTION
    PLACEMENT IS CLUSTERED VIA IS_A
*   Member of sets : IS_A
*                    IS_EXECUTEO_AFTER
    ITEM PT_TRAN_IO TYPE IS CHARACTER 6
    ITEM PT_MISC_INFO TYPE IS CHARACTER 30

RECORD NAME IS ACTIVITY
    PLACEMENT IS CLUSTERED VIA IS_MADE_UP_OF
*   Owner of sets :  MAY_BE_PERFORMEO_AS
*   Member of sets : IS_MAOE_UP_OF
    ITEM A_ACTIVITY_ID TYPE IS CHARACTER 6
    ITEM A_STATUS TYPE IS CHARACTER 1
    ITEM A_DESC TYPE IS CHARACTER 40
    ITEM A_MISC_INFO TYPE IS CHARACTER 40
    ITEM A_NUM_SUBPROC TYPE IS PACKEO OECIMAL 3

RECORD NAME IS SUBPROCESS_ACTIVITY
    PLACEMENT IS CLUSTEREO VIA MAY_BE_PERFORMEO_AS
*   Member of sets : MAY_BE_PERFORMEO_AS
    ITEM SA_SUBPROCESS_ID TYPE IS UNSIGNED NUMERIC 3
    ITEM SA_ACTIVITY_ID TYPE IS CHARACTER 6
    ITEM SA_STATUS TYPE IS CHARACTER 1
    ITEM SA_OESC TYPE IS CHARACTER 40
    ITEM SA_MISC_INFO TYPE IS CHARACTER 60

RECORO NAME IS MOVE_TIME
    PLACEMENT IS SCATTERED USING MV_START_RES_ID
                          MV_START_MACH_TYPE_IO
                          MV_END_RES_ID
                          MV_ENO_MACH_TYPE_ID
*   Owner of sets :  HAS_MOVE_HISTORY
*   Member of sets : ALL_MOVE_TIME
    ITEM MV_START_RES_ID TYPE IS CHARACTER 8
    ITEM MV_START_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM MV_END_RES_ID TYPE IS CHARACTER 8
    ITEM MV_ENO_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM MV_MOVE_TIME TYPE IS PACKEO OECIMAL 6 -2
    ITEM MV_MOVE_TIME_COMP_FACTOR TYPE IS PACKEO OECIMAL 6 -2
    ITEM MV_MOVE_TIME_VAL_LIM TYPE IS PACKED DECIMAL 6 -2

RECORD NAME IS PLANNING_PERIOO
    PLACEMENT IS CLUSTERED VIA ALL_PLANNING_PERIOD
*   Owner of sets :  MAY_BE_SPECIFIED_BY
*   Member of sets : ALL_PLANNING_PERIOO
    ITEM PP_PERIOD_ID TYPE IS CHARACTER 10
    ITEM PP_GREG_DATE TYPE IS CHARACTER 10
    ITEM PP_FISCAL_YR TYPE IS CHARACTER 10
    ITEM PP_FISCAL_QTR TYPE IS CHARACTER 10
    ITEM PP_FISCAL_MO TYPE IS CHARACTER 10
    ITEM PP_FISCAL_WK TYPE IS CHARACTER 10
    ITEM PP_MOAY_NUM TYPE IS CHARACTER 6
    ITEM PP_GREG_ST_DT TYPE IS CHARACTER 10
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    ITEM PP_GREG_END_DT TYPE IS CHARACTER 10
    ITEM PP_SHUT_DOWN_FLAG TYPE IS CHARACTER 1

RECORD NAME IS M_DAY
    PLACEMENT IS CLUSTERED VIA MAY_BE_SPECIFIED_BY
*   Member of sets : MAY_BE_SPECIFIED_BY
    ITEM MO_MDAY_NUM TYPE IS CHARACTER 6
    ITEM MO_GREG_OATE TYPE IS CHARACTER 10
    ITEM MD_FISCAL_YR TYPE IS CHARACTER 10
    ITEM MD_FISCAL_OTR TYPE IS CHARACTER 10
    ITEM MD_FISCAL_MO TYPE IS CHARACTER 10
    ITEM MD_FISCAL_WK TYPE IS CHARACTER 10

RECORD NAME IS GLOBAL_PARAMETER
    PLACEMENT IS CLUSTERED VIA ALL_GLOBAL_PARAMETER
*   Member of sets : ALL_GLOBAL_PARAMETER
    ITEM GP_ID TYPE IS CHARACTER 4
    ITEM GP_M_OAY_UPLIM TYPE IS CHARACTER 4
    ITEM GP_FW_BEGIN_DAY TYPE IS CHARACTER 1
    ITEM GP_PREV_FY_END TYPE IS CHARACTER 2
    ITEM GP_FWMONTHS TYPE IS CHARACTER 1
*       Occurs 12 times
    ITEM GP_SUM_FW_BRKDWN TYPE IS CHARACTER 2
    ITEM GP_MAX_PART_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_MOVE_SAMPLES TYPE IS PACKED OECIMAL 5
    ITEM GP_MAX_RMT_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_RO_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_EARLIEST_START_DT_ALL TYPE IS CHARACTER 10
    ITEM GP_LATEST_REQUIRED_DATE_ALL TYPE IS CHARACTER 10
    ITEM GP_MISSING_ROUTING_COUNT TYPE IS PACKEO OECIMAL 4
    ITEM GP_MISSING_ROUTING_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_MISSING_MOVE_LIMIT TYPE IS PACKEO OECIMAL 4
    ITEM GP_MISSING_OUEUE_LIMIT TYPE IS PACKED OECIMAL 4
    ITEM GP_SCHEDULE_PROB_LIMIT TYPE IS PACKEO DECIMAL 4
    ITEM GP_PART_LEAD_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_MOVE_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_Q_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_PRI_METHOD_1 TYPE IS UNSIGNED NUMERIC 1
    ITEM GP_PRI_METHOD_2 TYPE IS UNSIGNED NUMERIC 1

RECORO NAME IS PART_HISTORY
    PLACEMENT IS CLUSTERED VIA HAS_PART_HISTORY
*   Owner of sets :  HAS_PHS
*   Member of sets : HAS_PART_HISTORY
    ITEM PH_PART_NUM TYPE IS CHARACTER 24
    ITEM PH_NUM_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM PH_MAX_NUM_OF_SAMPLES TYPE IS PACKED OECIMAL 5
    ITEM PH_NUM_OF_HIST_OCCUR TYPE IS PACKED DECIMAL 5
    ITEM PH_AVG_ORD_OTY TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_OPER_OTY TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
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    ITEM PH_AVG_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_PLAN_QTY_VAR TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS PART_HISTORY_SAMPLE
    PLACEMENT IS CLUSTERED VIA HAS_PHS
*   Member of sets : HAS_PHS
    ITEM PHS_PART_NUM TYPE IS CHARACTER 24
    ITEM PHS_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_PLAN_QTY_VAR TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_OPER_START_DATE TYPE IS CHARACTER 10
    ITEM PHS_ACT_OPER_COMP_DATE TYPE IS CHARACTER 10
    ITEM PHS_REQUIRED_DATE TYPE IS CHARACTER 10

RECORD NAME IS ROUTING_OPERATION_HISTORY
    PLACEMENT IS CLUSTERED VIA HAS_ROH
*   Owner of sets :  HAS_ROHS
*   Member of sets : HAS_ROH
    ITEM ROH_ROUTING_NUM TYPE IS PACKED DECIMAL 2
    ITEM ROH_OPER_NUM TYPE IS CHARACTER 4
    ITEM ROH_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM ROH_MAX_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM ROH_NUM_OF_HIST_OCCUR TYPE IS PACKED DECIMAL 5
    ITEM ROH_AVG_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_PLAN_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_ACT_CLOCK_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_PLAN_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
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RECORO NAME IS ROUTING_OPERATION_HISTORY_SAMPL
*    Member of sets : HAS_RMTH_DETAIL
*                     HAS_ROHS
     ITEM ROHS_ROUTING_NUM TYPE IS PACKED DECIMAL 2
     ITEM ROHS_OPER_NUM TYPE IS CHARACTER 4
     ITEM ROHS_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_IDLE_TIME_OCC TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_CLOCK_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_PLAN_OUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_O_TIME TYPE IS PACKED OECIMAL 10 -2
     ITEM ROHS_EFFECT_LOAD_HRS TYPE IS PACKEO DECIMAL 10 -2
     ITEM ROHS_ACT_RUN_TIME_REP TYPE IS PACKED OECIMAL 10 -2
     ITEM ROHS_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_MOVE_TIME TYPE IS PACKEO DECIMAL 10 -2
     ITEM ROHS_PLAN_SETUP_TIME TYPE IS PACKEO DECIMAL 10 -2
     ITEM ROHS_PLAN_SETUP_LOSS TYPE IS PACKEO DECIMAL 10 -2
     ITEM ROHS_MACH_UTIL TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ORD_OTY TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_OPER_OTY TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_REQUIRED_DATE TYPE IS CHARACTER 10
     ITEM ROHS_OPER_COMP_DATE TYPE IS CHARACTER 10
     ITEM ROHS_OPER_START_DATE TYPE IS CHARACTER 10

RECORD NAME IS RESOURCE_MACH_TYPE_HISTORY
     PLACEMENT IS CLUSTERED VIA HAS_RMTH
*    Owner of sets  : HAS_RMTH_DETAIL
*    Member of sets : HAS_RMTH
     ITEM RMTH_RES_ID TYPE IS CHARACTER 8
     ITEM RMTH_MACHINE_TYPE TYPE IS CHARACTER 8
     ITEM RMTH_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
     ITEM RMTH_MAX_NUM_OF_SAMPLES TYPE IS PACKEO DECIMAL 5
     ITEM RMTH_NUM_OF_HIST_OCCUR TYPE IS PACKED DECIMAL 5
     ITEM RMTH_AVG_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_PLAN_SCRAP TYPE IS PACKEO OECIMAL 10 -2
     ITEM RMTH_AVG_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_PLAN_SETUP_TIME TYPE IS PACKEO DECIMAL 10 -2
     ITEM RMTH_AVG_PLAN_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_PLAN_OUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_ACT_O_TIME TYPE IS PACKEO DECIMAL 10 -2
     ITEM RMTH_AVG_MACH_UTIL TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_IDLE_TIME_OCC TYPE IS PACKED DECIMAL 10 -2
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RECORD NAME IS PR_CHANGE_REQUEST
    PLACEMENT IS CLUSTERED VIA HAS_UNPROCESSED_REQUESTS
*   Member of sets : HAS_UNPRDCESSED_REQUESTS
    ITEM PRCR_CHANGE_ID TYPE IS PACKED DECIMAL 3
    ITEM PRCR_EARL_START_DATE TYPE IS CHARACTER 10
    ITEM PRCR_REQUIRED_DATE TYPE IS CHARACTER 10
    ITEM PRCR_DRD_QTY TYPE IS PACKED DECIMAL 8 -2
    ITEM PRCR_CANCEL_FLAG TYPE IS CHARACTER 1

RECDRD NAME IS LDAD_UNIT_ACTUAL_PERFDRMANCE
    PLACEMENT IS CLUSTERED VIA HAS_LDAP
*   Member of sets : HAS_LDAP
    ITEM LUAP_ORD_NUM TYPE IS CHARACTER 12
    ITEM LUAP_DATE_PERF_REP TYPE IS CHARACTER 10
    ITEM LUAP_SHIFT_PERF_REP TYPE IS CHARACTER 8
    ITEM LUAP_ACT_DPER_START_DATE TYPE IS CHARACTER 10
    ITEM LUAP_ACT_DPER_CDMP_DATE TYPE IS CHARACTER 10
    ITEM LUAP_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_MACH_DDWN_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ACT_Q_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ACT_DPER_QTY TYPE IS PACKED DECIMAL 8
    ITEM LUAP_IDLE_TIME_OCC TYPE IS PACKED DECIMAL 8
    ITEM LUAP_RES_UTIL_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_MISS_ACT_VALUE_FLAG TYPE IS CHARACTER 1
    ITEM LUAP_LIM_VIDL_FLAG TYPE IS CHARACTER 1
    ITEM LUAP_ACT_SETUP_LDSS TYPE IS PACKED DECIMAL 8
    ITEM LUAP_ACT_CLDCK_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_MACH_UTIL TYPE IS PACKED DECIMAL 2
    ITEM LUAP_START_DATE_ACT_SU TYPE IS CHARACTER 10
    ITEM LUAP_CDMPL_DATE_ACT_SU TYPE IS CHARACTER 10
    ITEM LUAP_ACT_SCRAP_DPER TYPE IS PACKED DECIMAL 8
    ITEM LUAP_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
    ITEM LUAP_START_RES_ID TYPE IS CHARACTER 8
    ITEM LUAP_START_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM LUAP_END_RES_ID TYPE IS CHARACTER 8
    ITEM LUAP_END_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM LUAP_ADJ_SETUP_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_RUN_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_RES_UTIL_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_Q_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_DPER_QTY TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_IDLE_DCC TYPE IS PACKED DECIMAL 6 -2

RECDRD NAME IS RMT_PLANNING_PERIOD
    PLACEMENT IS SCATTERED USING RMTPP_RES_ID
                                 RMTPP_MACH_TYPE
*   Dwner of sets  : IS_CDMPDSED_DF_LTLU_SEG
*   Member of sets : ALL_RMT_PLANNING_PERIDD
*                    HAS_LT_RMT_PRDFILE
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    ITEM RMTPP_RES_ID TYPE IS CHARACTER 8
    ITEM RMTPP_MACH_TYPE TYPE IS CHARACTER 8
    ITEM RMTPP_PLN_PERIOD_ID TYPE IS CHARACTER 10
    ITEM RMTPP_PLN_PERIOD_NO TYPE IS PACKED DECIMAL 4
    ITEM RMTPP_TOTAL_LOAD_HRS TYPE IS PACKED DECIMAL 8 -2
    ITEM RMTPP_TOTAL_CAPACITY_HRS TYPE IS PACKED DECIMAL 8 -2
    ITEM RMTPP_CUM_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM RMTPP_CUM_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM RMTPP_AVERAGE_CAPACITY TYPE IS PACKED DECIMAL 10 -2
    ITEM RMTPP_NUM_MDAYS TYPE IS PACKED DECIMAL 6
    ITEM RMTPP_BEGIN_DATE TYPE IS CHARACTER 10
    ITEM RMTPP_END_DATE TYPE IS CHARACTER 10

RECORD NAME IS LT_LOAD_UNIT
*   Owner of sets  : IS_BROKEN_INTO_LTLU_SEGMENT
*   Member of sets : HAS_ELIGIBLE_LTLU
    ITEM LTLU_ORD_NUM TYPE IS CHARACTER 12
    ITEM LTLU_BEGIN_OPER_NUM TYPE IS CHARACTER 4
    ITEM LTLU_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 6 -2
    ITEM LTLU_TOT_NUM_SEG TYPE IS PACKED DECIMAL 2
    ITEM LTLU_RES_ID TYPE IS CHARACTER 8
    ITEM LTLU_MACH_TYPE TYPE IS CHARACTER 8

RECORD NAME IS LT_LOAD_UNIT_SEGMENT
    PLACEMENT IS CLUSTERED VIA IS_BROKEN_INTO_LTLU_SEGMENT
*   Member of sets : IS_COMPOSED_OF_LTLU_SEG
*                    IS_BROKEN_INTO_LTLU_SEGMENT
    ITEM LTLUS_ORD_NUM TYPE IS CHARACTER 12
    ITEM LTLUS_BEGIN_OPER_NUM TYPE IS CHARACTER 4
    ITEM LTLUS_SEG_NUM TYPE IS PACKED DECIMAL 4
    ITEM LTLUS_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 6 -2
    ITEM LTLUS_RES_ID TYPE IS CHARACTER 8
    ITEM LTLUS_MACH_TYPE TYPE IS CHARACTER 8
    ITEM LTLUS_SLACK_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LTLUS_COMP_O_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LTLUS_COMP_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LTLUS_PLN_PERIOD_NO TYPE IS PACKED DECIMAL 4
    ITEM LTLUS_PRIORITY_CODE_1 TYPE IS CHARACTER 8
    ITEM LTLUS_PRIORITY_CODE_2 TYPE IS CHARACTER 8
    ITEM LTLUS_MOD_FLAG TYPE IS CHARACTER 1
    ITEM LTLUS_START_DATE TYPE IS CHARACTER 10
    ITEM LTLUS_END_DATE TYPE IS CHARACTER 10

RECORD NAME IS LT_RES_MACH_TYP_LOAD_PROFILE
    PLACEMENT IS CLUSTERED VIA IS_PROFILED_BY_LTRMTLP
*   Member of sets : IS_PROFILED_BY_LTRMTLP
    ITEM LTRMTLP_RES_ID TYPE IS CHARACTER 8
    ITEM LTRMTLP_MACH_TYPE TYPE IS CHARACTER 8
    ITEM LTRMTLP_PLN_PERIOD_ID TYPE IS CHARACTER 10
*       Occurs 26 times
    ITEM LTRMTLP_NUM_PLN_PERIODS TYPE IS PACKED DECIMAL 4
    ITEM LTRMTLP_NUM_MACHINES TYPE IS PACKED DECIMAL 4
    ITEM LTRMTLP_TOTAL_LOAD TYPE IS PACKED DECIMAL 10 -2
*       Occurs 26 times
    ITEM LTRMTLP_PLN_PERIOD_NO TYPE IS PACKED DECIMAL 4
*       Occurs 26 times
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    ITEM LTRMTLP_CUM_CAPACITY TYPE IS PACKED DECIMAL 10 -2
*       Occurs 26 times
    ITEM LTRMTLP_TOTAL_CAPACITY TYPE IS PACKED DECIMAL 10 -2
*       Occurs 26 times
    ITEM LTRMTLP_CUM_LOAD TYPE IS PACKED DECIMAL 10 -2
*       Occurs 26 times
    ITEM LTRMTLP_AVERAGE_CAPACITY TYPE IS PACKED DECIMAL 10 -2
*       Occurs 26 times
    ITEM LTRMTLP_NUM_MDAYS TYPE IS PACKED DECIMAL 6
*       Occurs 26 times
    ITEM LTRMTLP_BEGIN_DATE TYPE IS CHARACTER 10
*       Occurs 26 times
    ITEM LTRMTLP_END_DATE TYPE IS CHARACTER 10
*       Occurs 26 times

RECORD NAME IS LT_RESOURCE_MACHINE_TYPE
    PLACEMENT IS SCATTERED USING LTRMT_RES_ID
                                 LTRMT_MACH_TYPE
*   Owner of sets   : HAS_LT_RMT_PROFILE
*                     IS_PROFILED_BY_LTRMTLP
*   Member of sets  : ALL_LT_RESOURCE_MACHINE_TYPE
    ITEM LTRMT_RES_ID TYPE IS CHARACTER 8
    ITEM LTRMT_MACH_TYPE TYPE IS CHARACTER 8
    ITEM LTRMT_BAL_SEL TYPE IS CHARACTER 1
    ITEM LTRMT_OVERLOADED_PO_FLAG TYPE IS CHARACTER 1

RECORD NAME IS LT_PRODUCTION_REQUIREMENT
    PLACEMENT IS SCATTERED USING LTPR_ORD_NUM
*   Owner of sets   : HAS_ELIGIBLE_LTLU
*                     HAS_TEMP_LTLU
*   Member of sets  : ALL_LT_PRODUCTION_REQUIREMENT
    ITEM LTPR_ORD_NUM TYPE IS CHARACTER 12
    ITEM LTPR_ORD_QTY TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS CAPACITY_INTERVAL
*   Member of sets  : HAS_CI
*                     ALSO_HAS_CI
    ITEM CI_RES_ID TYPE IS CHARACTER 8
    ITEM CI_MACHINE_TYPE TYPE IS CHARACTER 8
    ITEM CI_MACH_SER_NUM TYPE IS CHARACTER 8
    ITEM CI_BEGIN_INTERVAL_ID TYPE IS CHARACTER 10
    ITEM CI_END_INTERVAL_ID TYPE IS CHARACTER 10
    ITEM CI_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS MOVE_HISTORY
    PLACEMENT IS CLUSTERED VIA HAS_MOVE_HISTORY
*   Owner of sets   : HAS_MHS
*   Member of sets  : HAS_MOVE_HISTORY
    ITEM MH_START_RES_ID TYPE IS CHARACTER 8
    ITEM MH_START_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM MH_END_RES_ID TYPE IS CHARACTER 8
    ITEM MH_END_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM MH_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM MH_MAX_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM MH_NUM_OF_HIST_OCCUR TYPE IS PACKED DECIMAL 5
    ITEM MH_AVG_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM MH_AVG_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
```

```
RECORD NAME IS MOVE_HISTORY_SAMPLE
    PLACEMENT IS CLUSTERED VIA HAS_MHS
*   Member of sets : HAS_MHS
    ITEM MHS_START_RES_ID TYPE IS CHARACTER 8
    ITEM MHS_START_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM MHS_END_RES_ID TYPE IS CHARACTER 8
    ITEM MHS_END_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM MHS_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM MHS_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS LU_STATE
    PLACEMENT IS SCATTERED USING LUST_STATE_ID
*   Owner of sets  : APPEARS_AS
*   Member of sets : ALL_LU_STATE
    ITEM LUST_STATE_ID TYPE IS CHARACTER 4
    ITEM LUST_STATE_DESC TYPE IS CHARACTER 24

RECORD NAME IS LU_STATE_RELATION
    PLACEMENT IS CLUSTERED VIA IS_CHARACTERIZED_BY
*   Member of sets : IS_CHARACTERIZED_BY
*                    APPEARS_AS
    ITEM LSR_FIELD TYPE IS CHARACTER 4

RECORD NAME IS PR_STATE
    PLACEMENT IS SCATTERED USING PRS_PRSTATE_ID
*   Owner of sets  : INCLUDES_PR
*   Member of sets : ALL_PR_STATE
    ITEM PRS_PRSTATE_ID TYPE IS CHARACTER 4
    ITEM PRS_PRSTATE_DESC TYPE IS CHARACTER 24

RECORD NAME IS PR_STATE_RELATION
    PLACEMENT IS CLUSTERED VIA CAN_BE_DESCRIBED_BY
*   Member of sets : CAN_BE_DESCRIBED_BY
*                    INCLUDES_PR
    ITEM PRSR_PRFIELD TYPE IS CHARACTER 4

RECORD NAME IS TEMP_LTLU
*   Member of sets : HAS_TEMP_LTLU
    ITEM TLTLU_TEMP_AREA TYPE IS CHARACTER 122
*       Occurs 20 times

SET NAME IS ALL_LEVEL
    MODE IS CALC
      MEMBER IS LEVEL
          KEY IS L_LEV_NUM
*   Owner is SYSTEM
*   Member is LEVEL

SET NAME IS ALL_RESOURCE
    MODE IS CALC
      MEMBER IS RESOURCE
          KEY IS R_RES_ID
*   Owner is SYSTEM
*   Member is RESOURCE
```

```
SET NAME IS ALL_MACHINE_TYPE
    MODE IS CALC
      MEMBER IS MACHINE_TYPE
          KEY IS MT_MACH_TYPE
*   Owner is SYSTEM
*   Member is MACHINE_TYPE

SET NAME IS ALL_PART
    MODE IS CALC
      MEMBER IS PART
          KEY IS P_PART_NUM
*   Owner is SYSTEM
*   Member is PART

SET NAME IS ALL_PRODUCTION_REQUIREMENT
    MODE IS CALC
      MEMBER IS PRODUCTION_REQUIREMENT
          KEY IS PR_ORD_NUM
*   Owner is SYSTEM
*   Member is PRODUCTION_REQUIREMENT

SET NAME IS ALL_RESOURCE_MACHINE_TYPE
    MODE IS CALC
      MEMBER IS RESOURCE_MACHINE_TYPE
          KEY IS RMT_RES_ID
                 RMT_MACH_TYPE
*   Owner is SYSTEM
*   Member is RESOURCE_MACHINE_TYPE

SET NAME IS ALL_MACH_INSTANCE_PLAN_PERIOD
    MODE IS CALC
      MEMBER IS MACH_INSTANCE_PLANNING_PERIOD
          KEY IS MIPP_SER_NUM
                 MIPP_PLN_PERIOD_SEQ_NO
*   Owner is SYSTEM
*   Member is MACH_INSTANCE_PLANNING_PERIOD

SET NAME IS ALL_PLANNING_PERIOD
    MODE IS CALC
      MEMBER IS PLANNING_PERIOD
          KEY IS PP_PERIOD_ID
*   Owner is SYSTEM
*   Member is PLANNING_PERIOD

SET NAME IS ALL_TRANSACTION
    MODE IS CALC
      MEMBER IS TRANSACTION
          KEY IS T_TRAN_ID
*   Owner is SYSTEM
*   Member is TRANSACTION

SET NAME IS ALL_GLOBAL_PARAMETER
    MODE IS CALC
      MEMBER IS GLOBAL_PARAMETER
          KEY IS GP_ID
*   Owner is SYSTEM
*   Member is GLOBAL_PARAMETER
```

```
SET NAME IS ALL_MOVE_TIME
    MODE IS CALC
      MEMBER IS MOVE_TIME
           KEY IS MV_START_RES_ID
                  MV_START_MACH_TYPE_ID
                  MV_END_RES_ID
                  MV_END_MACH_TYPE_ID
*   Owner is SYSTEM
*   Member is MOVE_TIME

SET NAME IS ALL_LU_STATE
    MODE IS CALC
      MEMBER IS LU_STATE
           KEY IS LUST_STATE_ID
*   Owner is SYSTEM
*   Member is LU_STATE

SET NAME IS ALL_PR_STATE
    MODE IS CALC
      MEMBER IS PR_STATE
           KEY IS PRS_PRSTATE_ID
*   Owner is SYSTEM
*   Member is PR_STATE

SET NAME IS ALL_LT_RESOURCE_MACHINE_TYPE
    MODE IS CALC
      MEMBER IS LT_RESOURCE_MACHINE_TYPE
           KEY IS LTRMT_RES_ID
                  LTRMT_MACH_TYPE
*   Owner is SYSTEM
*   Member is LT_RESOURCE_MACHINE_TYPE

SET NAME IS ALL_RMT_PLANNING_PERIOD
    MODE IS CALC
      MEMBER IS RMT_PLANNING_PERIOD
           KEY IS RMTPP_RES_ID
                  RMTPP_MACH_TYPE
                  RMTPP_PLN_PERIOD_ID
*   Owner is SYSTEM
*   Member is RMT_PLANNING_PERIOD

SET NAME IS ALL_LT_PRODUCTION_REQUIREMENT
    MODE IS CALC
      MEMBER IS LT_PRODUCTION_REQUIREMENT
           KEY IS LTPR_ORD_NUM
*   Owner is SYSTEM
*   Member is LT_PRODUCTION_REQUIREMENT

SET NAME IS ALL_RESOURCE_PLANNING_PERIOD
    MODE IS CALC
      MEMBER IS RESOURCE_PLANNING_PERIOD
           KEY IS RPP_RESOURCE_ID
                  RPP_PLN_PERIOD_ID
*   Owner is SYSTEM
*   Member is RESOURCE_PLANNING_PERIOD
```

```
SET NAME IS CONTAINS_R
    MODE IS CHAIN
*   Owner is LEVEL
*   Member is RESOURCE

SET NAME IS SEL_FOR_RELEASE
    MODE IS CHAIN
*   Owner is LEVEL
*   Member is RESOURCE

SET NAME IS MAY_EXIST_AS
    MODE IS CHAIN
*   Owner is RESOURCE
*   Member is MACHINE_INSTANCE

SET NAME IS HAS
    MODE IS CHAIN
*   Owner is RESOURCE
*   Member is RESOURCE_MACHINE_TYPE

SET NAME IS IS_RESPONSIBLE_FOR
    MODE IS CHAIN
*   Owner is RESOURCE
*   Member is PRODUCTION_REQUIREMENT

SET NAME IS RELEASE_BY_DATE
    MODE IS INDEX
      NODE SIZE IS 200 BYTES
*   Owner is RESOURCE
*   Member is PRODUCTION_REQUIREMENT

SET NAME IS IS_ASSIGNED
    MODE IS INDEX
      NODE SIZE IS 200 BYTES
*   Owner is RESOURCE
*   Member is PRODUCTION_REQUIREMENT

SET NAME IS HAS_SHORT_TERM_LOAD
    MODE IS CHAIN
*   Owner is RESOURCE
*   Member is PRODUCTION_REQUIREMENT

SET NAME IS HAS_PSUEDO_RELEASE
    MODE IS CHAIN
*   Owner is RESOURCE
*   Member is PRODUCTION_REQUIREMENT

SET NAME IS CONTAINS_RELEASE
    MODE IS INDEX
      NODE SIZE IS 200 BYTES
*   Owner is RESOURCE
*   Member is PRODUCTION_REQUIREMENT

SET NAME IS CONTAINS_LLR
    MODE IS CHAIN
*   Owner is RESOURCE
*   Member is LOWER_LEVEL_RESOURCE
```

```
SET NAME IS IS_ALSO
    MODE IS CHAIN
*   Owner is RESOURCE
*   Member is LOWER_LEVEL_RESOURCE

SET NAME IS HAS_LT_RES_PROFILE
    MODE IS CHAIN
*   Owner is RESOURCE
*   Member is RESOURCE_PLANNING_PERIOD

SET NAME IS IS_REPRESENTED_BY
    MODE IS CHAIN
*   Owner is MACHINE_TYPE
*   Member is MACHINE_INSTANCE

SET NAME IS IS_USED_AS
    MODE IS CHAIN
*   Owner is MACHINE_TYPE
*   Member is RESOURCE_MACHINE_TYPE

SET NAME IS CONSISTS_OF_MI
    MODE IS CHAIN
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is MACHINE_INSTANCE

SET NAME IS HAS_SHORT_TERM_PROFILE
    MODE IS CHAIN
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is RESOURCE_MACH_TYPE_LOAD_PROFILE

SET NAME IS HAS_PROBS_LOADING
    MODE IS INDEX
      NODE SIZE IS 200 BYTES
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is LOAD_UNIT

SET NAME IS HAS_CI
    MODE IS INDEX
      NODE SIZE IS 200 BYTES
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is CAPACITY_INTERVAL

SET NAME IS HAS_RMTH
    MODE IS CHAIN
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is RESOURCE_MACH_TYPE_HISTORY

SET NAME IS HAS_RMTH_DETAIL
    MODE IS CHAIN
*   Owner is RESOURCE_MACH_TYPE_HISTORY
*   Member is ROUTING_OPERATION_HISTORY_SAMPL

SET NAME IS IS_PROFILED_BY
    MODE IS CHAIN
*   Owner is MACHINE_INSTANCE
*   Member is MACH_INSTANCE_PLANNING_PERIOD
```

```
SET NAME IS ALSO_HAS_CI
    MODE IS INDEX
      NODE SIZE IS 200 BYTES
*   Owner is MACHINE_INSTANCE
*   Member is CAPACITY_INTERVAL

SET NAME IS HAS_ROUTING
    MODE IS INDEX
      NODE SIZE IS 200 BYTES
*   Owner is PART
*   Member is PLANNED_ROUTING

SET NAME IS HAS_BEEN_ORDERED_IN
    MODE IS CHAIN
*   Owner is PART
*   Member is PRODUCTION_REQUIREMENT

SET NAME IS HAS_PART_HISTORY
    MODE IS CHAIN
*   Owner is PART
*   Member is PART_HISTORY

SET NAME IS HAS_PHS
    MODE IS CHAIN
*   Owner is PART_HISTORY
*   Member is PART_HISTORY_SAMPLE

SET NAME IS IS_COMPOSED_OF
    MODE IS INDEX
      NODE SIZE IS 200 BYTES
*   Owner is PLANNED_ROUTING
*   Member is ROUTING_OPERATION

SET NAME IS MAY_BE_REPLACED_BY
    MODE IS INDEX
      NODE SIZE IS 200 BYTES
*   Owner is ROUTING_OPERATION
*   Member is ALTERNATE_OPERATION

SET NAME IS HAS_LU
    MODE IS CHAIN
*   Owner is ROUTING_OPERATION
*   Member is LOAD_UNIT

SET NAME IS HAS_ROH
    MODE IS CHAIN
*   Owner is ROUTING_OPERATION
*   Member is ROUTING_OPERATION_HISTORY

SET NAME IS HAS_ROHS
    MODE IS CHAIN
*   Owner is ROUTING_OPERATION_HISTORY
*   Member is ROUTING_OPERATION_HISTORY_SAMPL
```

```
SET NAME IS MAY_ALSO_REQUIRE
    MODE IS INDEX
      NODE SIZE IS 200 BYTES
*   Owner is ALTERNATE_OPERATION
*   Member is CONTINGENCY_OPERATION

SET NAME IS CONSISTS_OF_LU
    MODE IS CHAIN
*   Owner is PRODUCTION_REQUIREMENT
*   Member is LOAD_UNIT

SET NAME IS CONSOLIDATED_LU
    MODE IS CHAIN
*   Owner is PRODUCTION_REQUIREMENT
*   Member is LOAD_UNIT

SET NAME IS HAS_UNPROCESSED_REQUESTS
    MODE IS CHAIN
*   Owner is PRODUCTION_REQUIREMENT
*   Member is PR_CHANGE_REQUEST

SET NAME IS CAN_BE_DESCRIBED_BY
    MODE IS CHAIN
*   Owner is PRODUCTION_REQUIREMENT
*   Member is PR_STATE_RELATION

SET NAME IS IS_LOADED_WITH
    MODE IS CHAIN
*   Owner is MACH_INSTANCE_PLANNING_PERIOD
*   Member is LOAD_UNIT
*   Member is LOAD_UNIT_SEGMENT

SET NAME IS IS_BROKEN_INTO
    MODE IS CHAIN
*   Owner is LOAD_UNIT
*   Member is LOAD_UNIT_SEGMENT

SET NAME IS HAS_LOAP
    MODE IS CHAIN
*   Owner is LOAD_UNIT
*   Member is LOAD_UNIT_ACTUAL_PERFORMANCE

SET NAME IS IS_CHARACTERIZED_BY
    MODE IS CHAIN
*   Owner is LOAD_UNIT
*   Member is LU_STATE_RELATION

SET NAME IS MAY_BE_SPECIFIED_BY
    MODE IS CHAIN
*   Owner is PLANNING_PERIOD
*   Member is M_DAY

SET NAME IS INCLUDES_PR
    MODE IS CHAIN
*   Owner is PR_STATE
*   Member is PR_STATE_RELATION
```

```
SET NAME IS HAS_MOVE_HISTORY
    MODE IS CHAIN
*   Owner is MOVE_TIME
*   Member is MOVE_HISTORY

SET NAME IS HAS_MHS
    MODE IS CHAIN
*   Owner is MOVE_HISTORY
*   Member is MOVE_HISTORY_SAMPLE

SET NAME IS APPEARS_AS
    MODE IS CHAIN
*   Owner is LU_STATE
*   Member is LU_STATE_RELATION

SET NAME IS HAS_ELIGIBLE_LTLU
    MODE IS CHAIN
*   Owner is LT_PRODUCTION_REQUIREMENT
*   Member is LT_LOAD_UNIT

SET NAME IS HAS_TEMP_LTLU
    MODE IS CHAIN
*   Owner is LT_PRODUCTION_REQUIREMENT
*   Member is TEMP_LTLU

SET NAME IS HAS_LT_RMT_PROFILE
    MODE IS CHAIN
*   Owner is LT_RESOURCE_MACHINE_TYPE
*   Member is RMT_PLANNING_PERIOD

SET NAME IS IS_PROFILED_BY_LTRMTLP
    MODE IS CHAIN
*   Owner is LT_RESOURCE_MACHINE_TYPE
*   Member is LT_RES_MACH_TYP_LOAD_PROFILE

SET NAME IS IS_COMPOSED_OF_LTLU_SEG
    MODE IS INDEX
      NODE SIZE IS 200 BYTES
*   Owner is RMT_PLANNING_PERIOD
*   Member is LT_LOAD_UNIT_SEGMENT

SET NAME IS IS_BROKEN_INTO_LTLU_SEGMENT
    MODE IS CHAIN
*   Owner is LT_LOAD_UNIT
*   Member is LT_LOAD_UNIT_SEGMENT

SET NAME IS IS_MADE_UP_OF
    MODE IS CHAIN
*   Owner is TRANSACTION
*   Member is ACTIVITY

SET NAME IS IS_A
    MODE IS CHAIN
*   Owner is TRANSACTION
*   Member is PRIOR_TRANSACTION
```

```
SET NAME IS IS_EXECUTED_AFTER
    MODE IS CHAIN
*   Owner is TRANSACTION
*   Member Is PRIOR_TRANSACTION

SET NAME IS MAY_BE_PERFORMED_AS
    MODE IS CHAIN
*   Owner is ACTIVITY
*   Member is SUBPROCESS_ACTIVITY
```

APPENDIX D

PP&CS DATA-BASE SUBSCHEMA TOTSUBFL LISTING

```
*****************************************************************
*                                                               *
*  THIS IS A SUBSCHEMA LISTING FOR TOTSUB_FL                    *
*                                                               *
*****************************************************************

SUBSCHEMA NAME IS TOTSUB_FL FOR TOTPPCS SCHEMA
*    Subschema version number :  9-OEC-1983 19:46:48.56
*    Schema version number :  9-DEC-1983 19:23:07.72 (1)

ALIAS ITEM RMTLP_EXCESS_ARRAY OF RESOURCE_MACH_TYPE_LOAD_PROFILE IS
RMTLP_EXCESS_PERIOD

REALM PROCPLN1
     IS PROCPLN1
REALM FACLOAD
     IS FACLOAD
REALM CONFIG
     IS CONFIG
REALM FLARRAY
     IS FLARRAY
REALM MIPPAREA
     IS MIPPAREA

RECORD NAME IS LEVEL
*    Within areas    : CONFIG
*    Owner of sets   : CONTAINS_R
*                      SEL_FOR_RELEASE
*    Member of sets : ALL_LEVEL
     ITEM L_LEV_NUM TYPE IS CHARACTER 2
     ITEM L_LEV_ID TYPE IS CHARACTER 8
     ITEM L_LEV_OPT_CO TYPE IS CHARACTER 8
     ITEM L_LEV_OESC TYPE IS CHARACTER 24

RECORO NAME IS RESOURCE
*    Within areas    : CONFIG
*    Owner of sets   : MAY_EXIST_AS
*                      HAS
*                      IS_RESPONSIBLE_FOR
*                      CONTAINS_LLR
*                      IS_ALSO
*    Member of sets : ALL_RESOURCE
*                      CONTAINS_R
*                      SEL_FOR_RELEASE
     ITEM R_RES_ID TYPE IS CHARACTER 8
     ITEM R_LEV_ID TYPE IS CHARACTER 8
     ITEM R_LEV_DPT_CD TYPE IS CHARACTER 8
     ITEM R_REL_LOAD_LOWER_LIM TYPE IS PACKEO DECIMAL 8
     ITEM R_REL_LOAD TYPE IS PACKEO DECIMAL 10 -2
     ITEM R_REL_LOAD_UP_LIM TYPE IS PACKED DECIMAL 8
     ITEM R_INWORK_DATE_REL_INT TYPE IS PACKED DECIMAL 8
     ITEM R_AUTO_REL_IND TYPE IS CHARACTER 1
     ITEM R_TOT_ACCUM_WORK TYPE IS PACKED DECIMAL 10 -2
     ITEM R_RES_LOAD_UNIT_HOURS TYPE IS PACKED DECIMAL 10 -2
     ITEM R_DISP_LOAD TYPE IS PACKED DECIMAL 10 -2
     ITEM R_CURRENT_LOAD TYPE IS PACKEO DECIMAL 10 -2
     ITEM R_WORK_TO_BE_RELEASED TYPE IS PACKED DECIMAL 8
     ITEM R_ACT_REL_QTY TYPE IS PACKED DECIMAL 10 -2
```

```
    ITEM R_RES_OESC TYPE IS CHARACTER 16
    ITEM R_PROO_RATE_TRACKING_SIG TYPE IS CHARACTER 1
    ITEM R_RES_EFFEC TYPE IS PACKEO OECIMAL 2
    ITEM R_RES_EFFIC TYPE IS PACKEO OECIMAL 2
    ITEM R_RES_CAP_UTIL TYPE IS PACKEO OECIMAL 2
    ITEM R_RES_SETUP_EFFIC TYPE IS PACKEO OECIMAL 2
    ITEM R_RES_TOT_SETUP_LOSS_RATE TYPE IS PACKED DECIMAL 2
    ITEM R_LEV_NUM TYPE IS CHARACTER 2
    ITEM R_OVERLOADED_PD_FLAG TYPE IS CHARACTER 1

RECORO NAME IS LOWER_LEVEL_RESOURCE
*   Within areas    : CONFIG
*   Member of sets : CONTAINS_LLR
*                    IS_ALSO
    ITEM LLR_RES_ID TYPE IS CHARACTER 8
    ITEM LLR_LL_RES_ID TYPE IS CHARACTER 8

RECORO NAME IS MACHINE_TYPE
*   Within areas    : CONFIG
*   Owner of sets   : IS_REPRESENTEO_BY
*                     IS_USED_AS
*   Member of sets : ALL_MACHINE_TYPE
    ITEM MT_MACH_TYPE TYPE IS CHARACTER 8
    ITEM MT_MACH_TYPE_DESC TYPE IS CHARACTER 16

RECORD NAME IS RESOURCE_MACHINE_TYPE
*   Within areas    : CONFIG
*   Owner of sets   : CONSISTS_OF_MI
*                     HAS_SHORT_TERM_PROFILE
*                     HAS_PROBS_LOADING
*                     HAS_CI
*   Member of sets : ALL_RESOURCE_MACHINE_TYPE
*                     HAS
*                     IS_USED_AS
    GROUP RMT_CALC_KEY
      ITEM RMT_RES_ID TYPE IS CHARACTER 8
      ITEM RMT_MACH_TYPE TYPE IS CHARACTER 8
    ENDGROUP RMT_CALC_KEY
    ITEM RMT_Q_TIME TYPE IS PACKED OECIMAL 6 -2
    ITEM RMT_EFFECT_RATE TYPE IS PACKEO OECIMAL 6 -2
    ITEM RMT_Q_TIME_VAL_LIM TYPE IS PACKEO DECIMAL 6 -2
    ITEM RMT_EFFIC TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_NUM_MACHINES TYPE IS PACKEO OECIMAL 3
    ITEM RMT_Q_TIME_COMP_FACTOR TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_RATIO_RUN_SETUP TYPE IS PACKED OECIMAL 6 -2
    ITEM RMT_AVG_MACH_TYPE_EFFIC TYPE IS PACKEO DECIMAL 2
    ITEM RMT_AVG_SETUP_EFFECT TYPE IS PACKED DECIMAL 2
    ITEM RMT_AVG_SETUP_LOSS_RATE TYPE IS PACKED OECIMAL 2
    ITEM RMT_AVG_MACH_TYPE_EFFEC TYPE IS PACKED DECIMAL 2
    ITEM RMT_RUN_TIME_VAL_LIM TYPE IS PACKED DECIMAL 8
    ITEM RMT_SETUP_TIME_VAL_LIM TYPE IS PACKED DECIMAL 8
    ITEM RMT_RES_UTIL_VAL_LIM TYPE IS PACKED DECIMAL 8
```

```
RECORD NAME IS MACHINE_INSTANCE
*   Within areas    : CONFIG
*   Owner of sets   : IS_PROFILED_BY
*                     ALSO_HAS_CI
*   Member of sets  : MAY_EXIST_AS
*                     IS_REPRESENTED_BY
*                     CONSISTS_OF_MI
    ITEM MI_MACH_SER_NUM TYPE IS CHARACTER 8
    ITEM MI_MACH_RES_ID TYPE IS CHARACTER 8
    ITEM MI_MACH_TYPE TYPE IS CHARACTER 8

RECORD NAME IS PART
*   Within areas    : PROCPLN1
*   Owner of sets   : HAS_BEEN_ORDERED_IN
*   Member of sets  : ALL_PART
    ITEM P_PART_NUM TYPE IS CHARACTER 24
    ITEM P_PART_DESC TYPE IS CHARACTER 32
    ITEM P_OVER_UNDER_QTY TYPE IS PACKED DECIMAL 8
    ITEM P_PRIME_RESP TYPE IS CHARACTER 8
    ITEM P_SCRAP_VAR_PART TYPE IS PACKED DECIMAL 8

RECORD NAME IS PRODUCTION_REQUIREMENT
*   Within areas    : FACLOAD
*   Owner of sets   : CONSISTS_OF_LU
*                     CONSOLIDATED_LU
*                     CAN_BE_DESCRIBED_BY
*   Member of sets  : ALL_PRODUCTION_REQUIREMENT
*                     IS_RESPONSIBLE_FOR
*                     HAS_BEEN_ORDERED_IN
    ITEM PR_ORD_NUM TYPE IS CHARACTER 12
    ITEM PR_PART_NUM TYPE IS CHARACTER 24
    ITEM PR_RES_ID TYPE IS CHARACTER 8
    ITEM PR_ORD_QTY TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_REQUIRED_DATE TYPE IS CHARACTER 10
    ITEM PR_STATUS_CODE TYPE IS CHARACTER 8
    ITEM PR_NO_ROUTING_FLAG TYPE IS CHARACTER 1
    ITEM PR_SCHED_PROB_FLAG TYPE IS CHARACTER 1
    ITEM PR_EARL_START_DATE TYPE IS CHARACTER 10
    ITEM PR_ORD_REV_CODE TYPE IS PACKED DECIMAL 2
    ITEM PR_PRIORITY_CODE_1 TYPE IS CHARACTER 8
    ITEM PR_PRIORITY_CODE_2 TYPE IS CHARACTER 8
    ITEM PR_EXPECTED_REL_DATE TYPE IS CHARACTER 10
    ITEM PR_REVISED_ORD_QTY TYPE IS PACKED DECIMAL 8
    ITEM PR_ACT_REL_DATE TYPE IS CHARACTER 10
    ITEM PR_PLANNED_ORD_QTY TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_SPAN_TIME TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_SUM_RUN_SETUP_TIME TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_CALC_EAR_ST_DT TYPE IS CHARACTER 10
```

```
RECORD NAME IS RESOURCE_MACH_TYPE_LOAD_PROFILE
*    Within areas     : FLARRAY
*    Member of sets   : HAS_SHORT_TERM_PROFILE
     ITEM RMTLP_RES_ID TYPE IS CHARACTER 8
     ITEM RMTLP_MACH_TYPE TYPE IS CHARACTER 8
     ITEM RMTLP_NUM_MACH TYPE IS PACKED DECIMAL 3
     ITEM RMTLP_NUM_PLN_PERIOD TYPE IS PACKED DECIMAL 3
     ITEM RMTLP_MACH_NO TYPE IS CHARACTER 8 OCCURS 10 TIMES
     GROUP RMTLP_EXCESS_GROUP OCCURS 10 TIMES
       ITEM RMTLP_EXCESS_PERIOD TYPE IS PACKED DECIMAL 6 -2 OCCURS 40 TIMES
     ENDGROUP RMTLP_EXCESS_GROUP

RECORD NAME IS MACH_INSTANCE_PLANNING_PERIOD
*    Within areas     : MIPPAREA
*    Owner of sets    : IS_LOADED_WITH
*    Member of sets   : ALL_MACH_INSTANCE_PLAN_PERIOD
*                       IS_PROFILED_BY
     GROUP MIPP_CALC_KEY
       ITEM MIPP_SER_NUM TYPE IS CHARACTER 8
       ITEM MIPP_PLN_PERIOD_SEQ_NO TYPE IS UNSIGNED NUMERIC 3
     ENDGROUP MIPP_CALC_KEY
     ITEM MIPP_RES_ID TYPE IS CHARACTER 8
     ITEM MIPP_MACH_TYPE TYPE IS CHARACTER 8
     ITEM MIPP_PLN_PERIOD_ID TYPE IS CHARACTER 10
     ITEM MIPP_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
     ITEM MIPP_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS LOAD_UNIT
*    Within areas     : FACLOAD
*    Owner of sets    : IS_BROKEN_INTO
*    Member of sets   : HAS_PROBS_LOADING
*                       CONSISTS_OF_LU
*                       CONSOLIDATED_LU
*                       IS_LOADED_WITH
     ITEM LU_ORD_NUM TYPE IS CHARACTER 12
     ITEM LU_BEGIN_OPER_NUM TYPE IS CHARACTER 4
     ITEM LU_END_OPER_NUM TYPE IS CHARACTER 4
     ITEM LU_EARL_ST_DT TYPE IS CHARACTER 10
     ITEM LU_LATE_ST_DT TYPE IS CHARACTER 10
     ITEM LU_EARL_COMPL_DT TYPE IS CHARACTER 10
     ITEM LU_REQUIRED_DATE TYPE IS CHARACTER 10
     ITEM LU_PRIORITY_CODE_1 TYPE IS CHARACTER 8
     ITEM LU_PRIORITY_CODE_2 TYPE IS CHARACTER 8
     ITEM LU_SLACK_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_QUEUE_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_SETUP_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_COMPRES_FLAG TYPE IS CHARACTER 1
     ITEM LU_RES_ID TYPE IS CHARACTER 8
     ITEM LU_MACH_TYPE TYPE IS CHARACTER 8
     ITEM LU_STATUS TYPE IS CHARACTER 8
     ITEM LU_TOT_NUM_SEG TYPE IS PACKED DECIMAL 2
     ITEM LU_MOD_FLAG TYPE IS CHARACTER 1
     ITEM LU_PREV_RES TYPE IS CHARACTER 8
     ITEM LU_PREV_MACH_TYPE TYPE IS CHARACTER 8
     ITEM LU_SLACK_TIME_USED_TO_MOVE TYPE IS PACKED DECIMAL 6 -2
```

```
    ITEM LU_SPEC_START_DATE TYPE IS CHARACTER 10
    ITEM LU_SPEC_COMP_DATE TYPE IS CHARACTER 10
    ITEM LU_CALC_ST_DT TYPE IS CHARACTER 10
    ITEM LU_SEQUENCE_NUM TYPE IS UNSIGNED NUMERIC 4
    ITEM LU_ALT_OPER_FLAG TYPE IS CHARACTER 1
    ITEM LU_ALT_OPER_NUM TYPE IS CHARACTER 4
    ITEM LU_COMP_Q_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LU_COMP_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LU_OPER_SPAN_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LU_CHECK_COUNTER TYPE IS PACKED DECIMAL 8
    ITEM LU_PARALLEL_PROC TYPE IS CHARACTER 1
    ITEM LU_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM LU_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
    ITEM LU_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS LOAD_UNIT_SEGMENT
*   Within areas    : FACLOAD
*   Member of sets : IS_LOADED_WITH
*                    IS_BROKEN_INTO
    ITEM LUS_ORD_NUM TYPE IS CHARACTER 12
    ITEM LUS_BEGIN_OPER_NUM TYPE IS CHARACTER 4
    ITEM LUS_END_OPER_NUM TYPE IS CHARACTER 4
    ITEM LUS_MULTI_PERIOD_FLAG TYPE IS CHARACTER 1
    ITEM LUS_SEG_NUM TYPE IS PACKED DECIMAL 2
    ITEM LUS_PARAL_PROC_FLAG TYPE IS CHARACTER 1
    ITEM LUS_MULTI_PARAL_PROC_FLAG TYPE IS CHARACTER 1
    ITEM LUS_LOAD_HRS TYPE IS PACKED DECIMAL 6 -2

RECORD NAME IS TRANSACTION
*   Within areas    : CONFIG
*   Owner of sets   : IS_MADE_UP_OF
*                     IS_A
*                     IS_EXECUTED_AFTER
*   Member of sets : ALL_TRANSACTION
    ITEM T_TRAN_ID TYPE IS CHARACTER 6
    ITEM T_BUSY_FLAG TYPE IS CHARACTER 1
    ITEM T_TRAN_DESC TYPE IS CHARACTER 40
    ITEM T_USER_ID TYPE IS CHARACTER 12
    ITEM T_START_DATE TYPE IS CHARACTER 10
    ITEM T_START_TIME TYPE IS CHARACTER 8
    ITEM T_END_DATE TYPE IS CHARACTER 10
    ITEM T_END_TIME TYPE IS CHARACTER 8
    ITEM T_INFO_BLOCK TYPE IS CHARACTER 250

RECORD NAME IS PRIOR_TRANSACTION
*   Within areas    : CONFIG
*   Member of sets : IS_A
*                    IS_EXECUTED_AFTER
    ITEM PT_TRAN_ID TYPE IS CHARACTER 6
    ITEM PT_MISC_INFO TYPE IS CHARACTER 30
```

```
RECORD NAME IS ACTIVITY
*   Within areas    : CONFIG
*   Owner of sets   : MAY_BE_PERFORMED_AS
*   Member of sets  : IS_MADE_UP_OF
    ITEM A_ACTIVITY_ID TYPE IS CHARACTER 6
    ITEM A_STATUS TYPE IS CHARACTER 1
    ITEM A_DESC TYPE IS CHARACTER 40
    ITEM A_MISC_INFO TYPE IS CHARACTER 40
    ITEM A_NUM_SUBPROC TYPE IS PACKED DECIMAL 3

RECORD NAME IS SUBPROCESS_ACTIVITY
*   Within areas    : CONFIG
*   Member of sets  : MAY_BE_PERFORMED_AS
    ITEM SA_SUBPROCESS_ID TYPE IS UNSIGNED NUMERIC 3
    ITEM SA_ACTIVITY_ID TYPE IS CHARACTER 6
    ITEM SA_STATUS TYPE IS CHARACTER 1
    ITEM SA_DESC TYPE IS CHARACTER 40
    ITEM SA_MISC_INFO TYPE IS CHARACTER 60

RECORD NAME IS MOVE_TIME
*   Within areas    : FACLOAD
*   Member of sets  : ALL_MOVE_TIME
    GROUP MV_CALC_KEY
       ITEM MV_START_RES_ID TYPE IS CHARACTER 8
       ITEM MV_START_MACH_TYPE_ID TYPE IS CHARACTER 8
       ITEM MV_END_RES_ID TYPE IS CHARACTER 8
       ITEM MV_END_MACH_TYPE_ID TYPE IS CHARACTER 8
    ENDGROUP MV_CALC_KEY
    ITEM MV_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM MV_MOVE_TIME_COMP_FACTOR TYPE IS PACKED DECIMAL 6 -2
    ITEM MV_MOVE_TIME_VAL_LIM TYPE IS PACKED DECIMAL 6 -2

RECORD NAME IS PLANNING_PERIOD
*   Within areas    : CONFIG
*   Owner of sets   : MAY_BE_SPECIFIED_BY
*   Member of sets  : ALL_PLANNING_PERIOD
    ITEM PP_PERIOD_ID TYPE IS CHARACTER 10
    ITEM PP_GREG_DATE TYPE IS CHARACTER 10
    ITEM PP_FISCAL_YR TYPE IS CHARACTER 10
    ITEM PP_FISCAL_QTR TYPE IS CHARACTER 10
    ITEM PP_FISCAL_MO TYPE IS CHARACTER 10
    ITEM PP_FISCAL_WK TYPE IS CHARACTER 10
    ITEM PP_MDAY_NUM TYPE IS CHARACTER 6
    ITEM PP_GREG_ST_DT TYPE IS CHARACTER 10
    ITEM PP_GREG_END_DT TYPE IS CHARACTER 10
    ITEM PP_SHUT_DOWN_FLAG TYPE IS CHARACTER 1

RECORD NAME IS M_DAY
*   Within areas    : CONFIG
*   Member of sets  : MAY_BE_SPECIFIED_BY
    ITEM MD_MDAY_NUM TYPE IS CHARACTER 6
    ITEM MD_GREG_DATE TYPE IS CHARACTER 10
    ITEM MD_FISCAL_YR TYPE IS CHARACTER 10
    ITEM MD_FISCAL_QTR TYPE IS CHARACTER 10
    ITEM MD_FISCAL_MO TYPE IS CHARACTER 10
    ITEM MD_FISCAL_WK TYPE IS CHARACTER 10
```

```
RECORD NAME IS GLOBAL_PARAMETER
*    Within areas    : CONFIG
*    Member of sets : ALL_GLOBAL_PARAMETER
     ITEM GP_IO TYPE IS CHARACTER 4
     ITEM GP_M_DAY_UPLIM TYPE IS CHARACTER 4
     ITEM GP_FW_BEGIN_DAY TYPE IS CHARACTER 1
     ITEM GP_PREV_FY_END TYPE IS CHARACTER 2
     GROUP GP_MONTH_ARRAY
       ITEM GP_FWMONTHS TYPE IS CHARACTER 1 OCCURS 12 TIMES
     ENDGROUP GP_MONTH_ARRAY
     ITEM GP_SUM_FW_BRKDWN TYPE IS CHARACTER 2
     ITEM GP_MAX_PART_SAMPLES TYPE IS PACKED DECIMAL 5
     ITEM GP_MAX_MOVE_SAMPLES TYPE IS PACKED DECIMAL 5
     ITEM GP_MAX_RMT_SAMPLES TYPE IS PACKED DECIMAL 5
     ITEM GP_MAX_RO_SAMPLES TYPE IS PACKED DECIMAL 5
     ITEM GP_EARLIEST_START_DT_ALL TYPE IS CHARACTER 10
     ITEM GP_LATEST_REQUIRED_DATE_ALL TYPE IS CHARACTER 10
     ITEM GP_MISSING_ROUTING_COUNT TYPE IS PACKED DECIMAL 4
     ITEM GP_MISSING_ROUTING_LIMIT TYPE IS PACKED DECIMAL 4
     ITEM GP_MISSING_MOVE_LIMIT TYPE IS PACKED DECIMAL 4
     ITEM GP_MISSING_QUEUE_LIMIT TYPE IS PACKED DECIMAL 4
     ITEM GP_SCHEDULE_PROB_LIMIT TYPE IS PACKED DECIMAL 4
     ITEM GP_PART_LEAD_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM GP_MOVE_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
     ITEM GP_Q_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
     ITEM GP_PRI_METHOD_1 TYPE IS UNSIGNED NUMERIC 1
     ITEM GP_PRI_METHOD_2 TYPE IS UNSIGNED NUMERIC 1

RECORD NAME IS CAPACITY_INTERVAL
*    Within areas    : CONFIG
*    Member of sets : HAS_CI
*                     ALSO_HAS_CI
     ITEM CI_RES_ID TYPE IS CHARACTER 8
     ITEM CI_MACHINE_TYPE TYPE IS CHARACTER 8
     ITEM CI_MACH_SER_NUM TYPE IS CHARACTER 8
     ITEM CI_BEGIN_INTERVAL_ID TYPE IS CHARACTER 10
     ITEM CI_END_INTERVAL_ID TYPE IS CHARACTER 10
     ITEM CI_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS PR_STATE
*    Within areas    : CONFIG
*    Owner of sets   : INCLUDES_PR
*    Member of sets : ALL_PR_STATE
     ITEM PRS_PRSTATE_ID TYPE IS CHARACTER 4
     ITEM PRS_PRSTATE_DESC TYPE IS CHARACTER 24

RECORD NAME IS PR_STATE_RELATION
*    Within areas    : CONFIG
*    Member of sets : CAN_BE_DESCRIBED_BY
*                     INCLUDES_PR
     ITEM PRSR_PRFIELD TYPE IS CHARACTER 4

SET NAME IS ALL_LEVEL
*    Owner is SYSTEM
*    Member is LEVEL
*         Insertion is AUTOMATIC retention is FIXED
```

```
SET NAME IS ALL_RESOURCE
*   Owner is SYSTEM
*   Member is RESOURCE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_MACHINE_TYPE
*   Owner is SYSTEM
*   Member is MACHINE_TYPE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_PART
*   Owner is SYSTEM
*   Member is PART
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_PRODUCTION_REQUIREMENT
*   Owner is SYSTEM
*   Member is PROOUCTION_REQUIREMENT
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_RESOURCE_MACHINE_TYPE
*   Owner is SYSTEM
*   Member is RESOURCE_MACHINE_TYPE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_MACH_INSTANCE_PLAN_PERIOO
*   Owner is SYSTEM
*   Member is MACH_INSTANCE_PLANNING_PERIOD
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_PLANNING_PERIOO
*   Owner is SYSTEM
*   Member is PLANNING_PERIOO
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_TRANSACTION
*   Owner is SYSTEM
*   Member is TRANSACTION
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_GLOBAL_PARAMETER
*   Owner is SYSTEM
*   Member is GLOBAL_PARAMETER
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_MOVE_TIME
*   Owner is SYSTEM
*   Member is MOVE_TIME
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_PR_STATE
*   Owner is SYSTEM
*   Member is PR_STATE
*       Insertion is AUTOMATIC retention is FIXED
```

```
SET NAME IS CONTAINS_R
*    Owner is LEVEL
*    Member is RESOURCE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS SEL_FOR_RELEASE
*    Owner is LEVEL
*    Member is RESOURCE
*         Insertion is MANUAL retention is OPTIONAL
*        Order is LAST

SET NAME IS MAY_EXIST_AS
*    Owner is RESOURCE
*    Member is MACHINE_INSTANCE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS HAS
*    Owner is RESOURCE
*    Member is RESOURCE_MACHINE_TYPE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS IS_RESPONSIBLE_FOR
*    Owner is RESOURCE
*    Member is PRODUCTION_REQUIREMENT
*         Insertion is MANUAL retention is OPTIONAL
*        Order is LAST

SET NAME IS CONTAINS_LLR
*    Owner is RESOURCE
*    Member is LOWER_LEVEL_RESOURCE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS IS_ALSO
*    Owner is RESOURCE
*    Member is LOWER_LEVEL_RESOURCE
*         Insertion is MANUAL retention is FIXEO
*        Order is LAST

SET NAME IS IS_REPRESENTEO_BY
*    Owner is MACHINE_TYPE
*    Member is MACHINE_INSTANCE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS IS_USED_AS
*    Owner is MACHINE_TYPE
*    Member is RESOURCE_MACHINE_TYPE
*         Insertion is AUTOMATIC retention is OPTIONAL
```

```
SET NAME IS CONSISTS_DF_MI
*   Owner is RESDURCE_MACHINE_TYPE
*   Member is MACHINE_INSTANCE
*       Insertion is AUTDMATIC retention is OPTIDNAL
*       Order is LAST

SET NAME IS HAS_SHORT_TERM_PROFILE
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is RESDURCE_MACH_TYPE_LOAD_PROFILE
*       Insertion is AUTDMATIC retention is OPTIONAL
*       Order is NEXT

SET NAME IS HAS_PROBS_LOADING
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is LOAD_UNIT
*       Insertion is MANUAL retention is DPTIONAL
*       Order is SDRTED BY
*           ASCENDING  LU_PRIORITY_CODE_1
*           DESCENDING LU_PRIDRITY_CODE_2
*           Duplicates are LAST

SET NAME IS HAS_CI
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is CAPACITY_INTERVAL
*       Insertion is MANUAL retention is OPTIONAL
*       Order is SORTED BY
*           ASCENDING  CI_BEGIN_INTERVAL_IO
*           Ouplicates are LAST

SET NAME IS IS_PROFILED_BY
*   Owner is MACHINE_INSTANCE
*   Member is MACH_INSTANCE_PLANNING_PERIOO
*       Insertion is AUTOMATIC retention is OPTIDNAL
*       Order is NEXT

SET NAME IS ALSD_HAS_CI
*   Owner is MACHINE_INSTANCE
*   Member is CAPACITY_INTERVAL
*       Insertion is MANUAL retention is OPTIONAL
*       Order is SORTED BY
*           ASCENDING  CI_BEGIN_INTERVAL_ID
*           Duplicates are LAST

SET NAME IS HAS_BEEN_ORDERED_IN
*   Owner is PART
*   Member is PRODUCTION_REQUIREMENT
*       Insertion is AUTOMATIC retention is OPTIDNAL
*       Order is LAST

SET NAME IS CONSISTS_DF_LU
*   Owner is PRDDUCTIDN_REQUIREMENT
*   Member is LOAO_UNIT
*       Insertion is AUTOMATIC retention is OPTIDNAL
*       Order is NEXT
```

```
SET NAME IS CONSOLIDATED_LU
*   Owner is PRODUCTION_REQUIREMENT
*   Member is LOAD_UNIT
*        Insertion is MANUAL retention is OPTIONAL
*       Order is NEXT

SET NAME IS CAN_BE_DESCRIBED_BY
*   Owner is PRODUCTION_REQUIREMENT
*   Member is PR_STATE_RELATION
*        Insertion is AUTOMATIC retention is FIXED
*       Order is LAST

SET NAME IS IS_LOADED_WITH
*   Owner is MACH_INSTANCE_PLANNING_PERIOD
*   Member is LOAD_UNIT
*        Insertion is MANUAL retention is OPTIONAL
*       Order is NEXT
*   Member is LOAD_UNIT_SEGMENT
*        Insertion is MANUAL retention is OPTIONAL
*       Order is NEXT

SET NAME IS IS_BROKEN_INTO
*   Owner is LOAD_UNIT
*   Member is LOAD_UNIT_SEGMENT
*        Insertion is AUTOMATIC retention is FIXED
*       Order is NEXT

SET NAME IS MAY_BE_SPECIFIED_BY
*   Owner is PLANNING_PERIOD
*   Member is M_DAY
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS INCLUDES_PR
*   Owner is PR_STATE
*   Member is PR_STATE_RELATION
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_MADE_UP_OF
*   Owner is TRANSACTION
*   Member is ACTIVITY
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is NEXT

SET NAME IS IS_A
*   Owner is TRANSACTION
*   Member is PRIOR_TRANSACTION
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_EXECUTED_AFTER
*   Owner is TRANSACTION
*   Member is PRIOR_TRANSACTION
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST
```

```
SET NAME IS MAY_BE_PERFORMED_AS
*    Owner is ACTIVITY
*    Member is SUBPROCESS_ACTIVITY
*         Insertion is AUTOMATIC retention is OPTIONAL
*         Order is LAST
```

APPENDIX E

PP&CS DATA-BASE SUBSCHEMA TOTSUBRC LISTING

```
*************************************************************
*                                                           *
*  THIS IS A SUBSCHEMA LISTING FOR TOTSUB_RC                *
*                                                           *
*************************************************************

SUBSCHEMA NAME IS TOTSUB_RC FOR TOTPPCS SCHEMA
*   Subschema version number :  9-OEC-1983 19:52:52.33
*   Schema version number :  9-DEC-1983 19:23:07.72 (1)

REALM CONFIG
    IS CONFIG

RECORD NAME IS LEVEL
*   Within areas    : CONFIG
*   Owner of sets   : CONTAINS_R
*                     SEL_FOR_RELEASE
*   Member of sets . ALL_LEVEL
    ITEM L_LEV_NUM TYPE IS CHARACTER 2
    ITEM L_LEV_ID TYPE IS CHARACTER 8
    ITEM L_LEV_OPT_CD TYPE IS CHARACTER 8
    ITEM L_LEV_OESC TYPE IS CHARACTER 24

RECORO NAME IS RESOURCE
*   Within areas    : CONFIG
*   Owner of sets   : MAY_EXIST_AS
*                     HAS
*                     CONTAINS_LLR
*                     IS_ALSO
*                     HAS_LT_RES_PROFILE
*   Member of sets : ALL_RESOURCE
*                     CONTAINS_R
*                     SEL_FOR_RELEASE
    ITEM R_RES_IO TYPE IS CHARACTER 8
    ITEM R_LEV_IO TYPE IS CHARACTER 8
    ITEM R_LEV_OPT_CO TYPE IS CHARACTER 8
    ITEM R_REL_LOAD_LOWER_LIM TYPE IS PACKEO OECIMAL 8
    ITEM R_REL_LOAD TYPE IS PACKEO OECIMAL 10 -2
    ITEM R_REL_LOAO_UP_LIM TYPE IS PACKEO OECIMAL 8
    ITEM R_INWORK_DATE_REL_INT TYPE IS PACKEO OECIMAL 8
    ITEM R_AUTO_REL_INO TYPE IS CHARACTER 1
    ITEM R_TOT_ACCUM_WORK TYPE IS PACKED DECIMAL 10 -2
    ITEM R_RES_LOAD_UNIT_HOURS TYPE IS PACKEO DECIMAL 10 -2
    ITEM R_OISP_LOAD TYPE IS PACKEO OECIMAL 10 -2
    ITEM R_CURRENT_LOAD TYPE IS PACKED DECIMAL 10 -2
    ITEM R_WORK_TO_BE_RELEASEO TYPE IS PACKED DECIMAL 8
    ITEM R_ACT_REL_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM R_RES_OESC TYPE IS CHARACTER 16
    ITEM R_PROD_RATE_TRACKING_SIG TYPE IS CHARACTER 1
    ITEM R_RES_EFFEC TYPE IS PACKED DECIMAL 2
    ITEM R_RES_EFFIC TYPE IS PACKED DECIMAL 2
    ITEM R_RES_CAP_UTIL TYPE IS PACKED DECIMAL 2
    ITEM R_RES_SETUP_EFFIC TYPE IS PACKED DECIMAL 2
    ITEM R_RES_TOT_SETUP_LOSS_RATE TYPE IS PACKEO OECIMAL 2
    ITEM R_LEV_NUM TYPE IS CHARACTER 2
    ITEM R_OVERLOADED_PD_FLAG TYPE IS CHARACTER 1
```

```
RECDRD NAME IS LOWER_LEVEL_RESDURCE
*   Within areas    : CDNFIG
*   Member of sets : CONTAINS_LLR
*                     IS_ALSO
     ITEM LLR_RES_ID TYPE IS CHARACTER 8
     ITEM LLR_LL_RES_ID TYPE IS CHARACTER 8

RECORD NAME IS RESOURCE_PLANNING_PERIOD
*   Within areas    : CONFIG
*   Member of sets : ALL_RESOURCE_PLANNING_PERIDD
*                     HAS_LT_RES_PROFILE
     GROUP RPP_CALC_KEY
       ITEM RPP_RESOURCE_ID TYPE IS CHARACTER 8
       ITEM RPP_PLN_PERIOD_ID TYPE IS CHARACTER 10
     ENDGROUP RPP_CALC_KEY
     ITEM RPP_TOTAL_CAPACITY_HRS TYPE IS PACKED DECIMAL 8 -2
     ITEM RPP_TDTAL_LDAD_HRS TYPE IS PACKED DECIMAL 8 -2
     ITEM RPP_CUM_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2
     ITEM RPP_CUM_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS MACHINE_TYPE
*   Within areas    : CONFIG
*   Dwner of sets   : IS_REPRESENTEO_BY
*                     IS_USED_AS
*   Member of sets : ALL_MACHINE_TYPE
     ITEM MT_MACH_TYPE TYPE IS CHARACTER 8
     ITEM MT_MACH_TYPE_DESC TYPE IS CHARACTER 16

RECORO NAME IS RESOURCE_MACHINE_TYPE
*   Within areas    : CONFIG
*   Owner of sets   : CONSISTS_OF_MI
*                     HAS_CI
*   Member of sets : ALL_RESOURCE_MACHINE_TYPE
*                     HAS
*                     IS_USED_AS
     GROUP RMT_CALC_KEY
       ITEM RMT_RES_ID TYPE IS CHARACTER 8
       ITEM RMT_MACH_TYPE TYPE IS CHARACTER 8
     ENDGROUP RMT_CALC_KEY
     ITEM RMT_Q_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM RMT_EFFECT_RATE TYPE IS PACKED DECIMAL 6 -2
     ITEM RMT_Q_TIME_VAL_LIM TYPE IS PACKED DECIMAL 6 -2
     ITEM RMT_EFFIC TYPE IS PACKEO OECIMAL 6 -2
     ITEM RMT_NUM_MACHINES TYPE IS PACKED DECIMAL 3
     ITEM RMT_Q_TIME_CDMP_FACTOR TYPE IS PACKED DECIMAL 6 -2
     ITEM RMT_RATIO_RUN_SETUP TYPE IS PACKEO DECIMAL 6 -2
     ITEM RMT_AVG_MACH_TYPE_EFFIC TYPE IS PACKED DECIMAL 2
     ITEM RMT_AVG_SETUP_EFFECT TYPE IS PACKED DECIMAL 2
     ITEM RMT_AVG_SETUP_LOSS_RATE TYPE IS PACKED DECIMAL 2
     ITEM RMT_AVG_MACH_TYPE_EFFEC TYPE IS PACKEO OECIMAL 2
     ITEM RMT_RUN_TIME_VAL_LIM TYPE IS PACKEO OECIMAL 8
     ITEM RMT_SETUP_TIME_VAL_LIM TYPE IS PACKEO OECIMAL 8
     ITEM RMT_RES_UTIL_VAL_LIM TYPE IS PACKED DECIMAL 8
```

```
RECORO NAME IS MACHINE_INSTANCE
*    Within areas    : CONFIG
*    Owner of sets   : ALSO_HAS_CI
*    Member of sets  : MAY_EXIST_AS
*                      IS_REPRESENTED_BY
*                      CONSISTS_OF_MI
     ITEM MI_MACH_SER_NUM TYPE IS CHARACTER 8
     ITEM MI_MACH_RES_ID TYPE IS CHARACTER 8
     ITEM MI_MACH_TYPE TYPE IS CHARACTER 8

RECORO NAME IS TRANSACTION
*    Within areas    : CONFIG
*    Owner of sets   : IS_MAOE_UP_OF
*                      IS_A
*                      IS_EXECUTEO_AFTER
*    Member of sets  : ALL_TRANSACTION
     ITEM T_TRAN_IO TYPE IS CHARACTER 6
     ITEM T_BUSY_FLAG TYPE IS CHARACTER 1
     ITEM T_TRAN_OESC TYPE IS CHARACTER 40
     ITEM T_USER_IO TYPE IS CHARACTER 12
     ITEM T_START_OATE TYPE IS CHARACTER 10
     ITEM T_START_TIME TYPE IS CHARACTER 8
     ITEM T_ENO_DATE TYPE IS CHARACTER 10
     ITEM T_ENO_TIME TYPE IS CHARACTER 8
     ITEM T_INFO_BLDCK TYPE IS CHARACTER 250

RECORD NAME IS PRIDR_TRANSACTIDN
*    Within areas    : CDNFIG
*    Member of sets  : IS_A
*                      IS_EXECUTED_AFTER
     ITEM PT_TRAN_ID TYPE IS CHARACTER 6
     ITEM PT_MISC_INFO TYPE IS CHARACTER 30

RECORO NAME IS ACTIVITY
*    Within areas    : CONFIG
*    Owner of sets   : MAY_BE_PERFORMED_AS
*    Member of sets  : IS_MADE_UP_OF
     ITEM A_ACTIVITY_ID TYPE IS CHARACTER 6
     ITEM A_STATUS TYPE IS CHARACTER 1
     ITEM A_OESC TYPE IS CHARACTER 40
     ITEM A_MISC_INFO TYPE IS CHARACTER 40
     ITEM A_NUM_SUBPRDC TYPE IS PACKEO DECIMAL 3

RECORD NAME IS SUBPRDCESS_ACTIVITY
*    WithIn areas    : CONFIG
*    Member of sets  : MAY_BE_PERFORMEO_AS
     ITEM SA_SUBPROCESS_ID TYPE IS UNSIGNED NUMERIC 3
     ITEM SA_ACTIVITY_ID TYPE IS CHARACTER 6
     ITEM SA_STATUS TYPE IS CHARACTER 1
     ITEM SA_DESC TYPE IS CHARACTER 40
     ITEM SA_MISC_INFO TYPE IS CHARACTER 60
```

```
RECORD NAME IS PLANNING_PERIDD
*   Within areas    : CONFIG
*   Dwner of sets   : MAY_BE_SPECIFIED_BY
*   Member of sets  : ALL_PLANNING_PERIDD
     ITEM PP_PERIDD_ID TYPE IS CHARACTER 10
     ITEM PP_GREG_DATE TYPE IS CHARACTER 10
     ITEM PP_FISCAL_YR TYPE IS CHARACTER 10
     ITEM PP_FISCAL_QTR TYPE IS CHARACTER 10
     ITEM PP_FISCAL_MO TYPE IS CHARACTER 10
     ITEM PP_FISCAL_WK TYPE IS CHARACTER 10
     ITEM PP_MDAY_NUM TYPE IS CHARACTER 6
     ITEM PP_GREG_ST_DT TYPE IS CHARACTER 10
     ITEM PP_GREG_END_DT TYPE IS CHARACTER 10
     ITEM PP_SHUT_DDWN_FLAG TYPE IS CHARACTER 1

RECORD NAME IS M_DAY
*   Within areas     CDNFIG
*   Member of sets : MAY_BE_SPECIFIED_BY
     ITEM MD_MDAY_NUM TYPE IS CHARACTER 6
     ITEM MD_GREG_DATE TYPE IS CHARACTER 10
     ITEM MD_FISCAL_YR TYPE IS CHARACTER 10
     ITEM MD_FISCAL_QTR TYPE IS CHARACTER 10
     ITEM MD_FISCAL_MO TYPE IS CHARACTER 10
     ITEM MD_FISCAL_WK TYPE IS CHARACTER 10

RECORD NAME IS GLDBAL_PARAMETER
*   Within areas    : CDNFIG
*   Member of sets : ALL_GLDBAL_PARAMETER
     ITEM GP_ID TYPE IS CHARACTER 4
     ITEM GP_M_DAY_UPLIM TYPE IS CHARACTER 4
     ITEM GP_FW_BEGIN_DAY TYPE IS CHARACTER 1
     ITEM GP_PREV_FY_END TYPE IS CHARACTER 2
     GRDUP GP_MONTH_ARRAY
       ITEM GP_FWMONTHS TYPE IS CHARACTER 1 DCCURS 12 TIMES
     ENDGRDUP GP_MONTH_ARRAY
     ITEM GP_SUM_FW_BRKDWN TYPE IS CHARACTER 2
     ITEM GP_MAX_PART_SAMPLES TYPE IS PACKED DECIMAL 5
     ITEM GP_MAX_MOVE_SAMPLES TYPE IS PACKED DECIMAL 5
     ITEM GP_MAX_RMT_SAMPLES TYPE IS PACKED DECIMAL 5
     ITEM GP_MAX_RD_SAMPLES TYPE IS PACKED DECIMAL 5
     ITEM GP_EARLIEST_START_DT_ALL TYPE IS CHARACTER 10
     ITEM GP_LATEST_REQUIRED_DATE_ALL TYPE IS CHARACTER 10
     ITEM GP_MISSING_RDUTING_CDUNT TYPE IS PACKED DECIMAL 4
     ITEM GP_MISSING_RDUTING_LIMIT TYPE IS PACKED DECIMAL 4
     ITEM GP_MISSING_MOVE_LIMIT TYPE IS PACKED DECIMAL 4
     ITEM GP_MISSING_QUEUE_LIMIT TYPE IS PACKED DECIMAL 4
     ITEM GP_SCHEDULE_PRDB_LIMIT TYPE IS PACKED DECIMAL 4
     ITEM GP_PART_LEAD_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM GP_MOVE_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
     ITEM GP_Q_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
     ITEM GP_PRI_METHOD_1 TYPE IS UNSIGNED NUMERIC 1
     ITEM GP_PRI_METHDD_2 TYPE IS UNSIGNED NUMERIC 1
```

```
RECORD NAME IS CAPACITY_INTERVAL
*   Within areas    : CONFIG
*   Member of sets : HAS_CI
*                    ALSO_HAS_CI
    ITEM CI_RES_ID TYPE IS CHARACTER 8
    ITEM CI_MACHINE_TYPE TYPE IS CHARACTER 8
    ITEM CI_MACH_SER_NUM TYPE IS CHARACTER 8
    ITEM CI_BEGIN_INTERVAL_ID TYPE IS CHARACTER 10
    ITEM CI_END_INTERVAL_ID TYPE IS CHARACTER 10
    ITEM CI_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2

SET NAME IS ALL_LEVEL
*   Owner is SYSTEM
*   Member is LEVEL
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_RESOURCE
*   Owner is SYSTEM
*   Member is RESOURCE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_MACHINE_TYPE
*   Owner is SYSTEM
*   Member is MACHINE_TYPE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_RESOURCE_MACHINE_TYPE
*   Owner is SYSTEM
*   Member is RESOURCE_MACHINE_TYPE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_PLANNING_PERIOD
*   Owner is SYSTEM
*   Member is PLANNING_PERIOD
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_TRANSACTION
*   Owner is SYSTEM
*   Member is TRANSACTION
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_GLOBAL_PARAMETER
*   Owner is SYSTEM
*   Member is GLOBAL_PARAMETER
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_RESOURCE_PLANNING_PERIOD
*   Owner is SYSTEM
*   Member is RESOURCE_PLANNING_PERIOD
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS CONTAINS_R
*   Owner is LEVEL
*   Member is RESOURCE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST
```

```
SET NAME IS SET_FOR_RELEASE
*   Owner is LEVEL
*   Member is RESOURCE
*       Insertion is MANUAL retention is OPTIONAL
*       Order is LAST

SET NAME IS MAY_EXIST_AS
*   Owner is RESOURCE
*   Member is MACHINE_INSTANCE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS
*   Owner is RESOURCE
*   Member is RESOURCE_MACHINE_TYPE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS CONTAINS_LLR
*   Owner is RESOURCE
*   Member is LOWER_LEVEL_RESOURCE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_ALSO
*   Owner is RESOURCE
*   Member is LOWER_LEVEL_RESOURCE
*       Insertion is MANUAL retention is FIXED
*       Order is LAST

SET NAME IS HAS_LT_RES_PROFILE
*   Owner is RESOURCE
*   Member is RESOURCE_PLANNING_PERIOD
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_REPRESENTED_BY
*   Owner is MACHINE_TYPE
*   Member is MACHINE_INSTANCE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_USED_AS
*   Owner is MACHINE_TYPE
*   Member is RESOURCE_MACHINE_TYPE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS CONSISTS_OF_MI
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is MACHINE_INSTANCE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST
```

```
SET NAME IS HAS_CI
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is CAPACITY_INTERVAL
*        Insertion is MANUAL retention is OPTIONAL
*        Order is SORTED BY
*            ASCENDING  CI_BEGIN_INTERVAL_ID
*            Duplicates are LAST

SET NAME IS ALSO_HAS_CI
*   Owner is MACHINE_INSTANCE
*   Member is CAPACITY_INTERVAL
*        Insertion is MANUAL retention is OPTIONAL
*        Order is SORTED BY
*            ASCENDING  CI_BEGIN_INTERVAL_ID
*            Duplicates are LAST

SET NAME IS MAY_BE_SPECIFIED_BY
*   Owner is PLANNING_PERIOD
*   Member is M_DAY
*        Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS IS_MADE_UP_OF
*   Owner is TRANSACTION
*   Member is ACTIVITY
*        Insertion is AUTOMATIC retention is OPTIONAL
*        Order is NEXT

SET NAME IS IS_A
*   Owner is TRANSACTION
*   Member is PRIOR_TRANSACTION
*        Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS IS_EXECUTED_AFTER
*   Owner is TRANSACTION
*   Member is PRIOR_TRANSACTION
*        Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS MAY_BE_PERFORMED_AS
*   Owner is ACTIVITY
*   Member is SUBPROCESS_ACTIVITY
*        Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST
```

APPENDIX F

PP&CS DATA-BASE SUBSCHEMA TOTSUBPP LISTING

```
*****************************************************************
*                                                               *
*  THIS IS A SUBSCHEMA LISTING FOR TDTSUB_PP                    *
*                                                               *
*****************************************************************

SUBSCHEMA NAME IS TOTSUB_PP FOR TDTPPCS SCHEMA
*    Subschema version number :  9-DEC-1983 19:51:18.52
*    Schema version number :  9-DEC-1983 19:23:07.72 (1)

REALM PROCPLN1M
     IS PRDCPLN1
REALM PRDCPLN2
     IS PROCPLN2
REALM CDNFIG
     IS CONFIG

RECORD NAME IS LEVEL
*    Within areas    : CDNFIG
*    Dwner of sets   : CONTAINS_R
*                      SEL_FOR_RELEASE
*    Member of sets  : ALL_LEVEL
     ITEM L_LEV_NUM TYPE IS CHARACTER 2
     ITEM L_LEV_ID TYPE IS CHARACTER 8
     ITEM L_LEV_DPT_CD TYPE IS CHARACTER 8
     ITEM L_LEV_DESC TYPE IS CHARACTER 24

RECDRD NAME IS RESDURCE
*    Within areas    : CDNFIG
*    Owner of sets   : MAY_EXIST_AS
*                      HAS
*    Member of sets  : ALL_RESDURCE
*                      CONTAINS_R
*                      SEL_FOR_RELEASE
     ITEM R_RES_ID TYPE IS CHARACTER 8
     ITEM R_LEV_ID TYPE IS CHARACTER 8
     ITEM R_LEV_DPT_CD TYPE IS CHARACTER 8
     ITEM R_REL_LDAD_LOWER_LIM TYPE IS PACKED DECIMAL 8
     ITEM R_REL_LDAD TYPE IS PACKED DECIMAL 10 -2
     ITEM R_REL_LDAD_UP_LIM TYPE IS PACKED DECIMAL 8
     ITEM R_INWORK_DATE_REL_INT TYPE IS PACKED DECIMAL 8
     ITEM R_AUTD_REL_IND TYPE IS CHARACTER 1
     ITEM R_TDT_ACCUM_WORK TYPE IS PACKED DECIMAL 10 -2
     ITEM R_RES_LDAD_UNIT_HDURS TYPE IS PACKED DECIMAL 10 -2
     ITEM R_DISP_LDAD TYPE IS PACKED DECIMAL 10 -2
     ITEM R_CURRENT_LOAD TYPE IS PACKED DECIMAL 10 -2
     ITEM R_WORK_TD_BE_RELEASED TYPE IS PACKED DECIMAL 8
     ITEM R_ACT_REL_QTY TYPE IS PACKED DECIMAL 10 -2
     ITEM R_RES_DESC TYPE IS CHARACTER 16
     ITEM R_PRDD_RATE_TRACKING_SIG TYPE IS CHARACTER 1
     ITEM R_RES_EFFEC TYPE IS PACKED DECIMAL 2
     ITEM R_RES_EFFIC TYPE IS PACKED DECIMAL 2
     ITEM R_RES_CAP_UTIL TYPE IS PACKED DECIMAL 2
     ITEM R_RES_SETUP_EFFIC TYPE IS PACKED DECIMAL 2
     ITEM R_RES_TDT_SETUP_LDSS_RATE TYPE IS PACKED DECIMAL 2
     ITEM R_LEV_NUM TYPE IS CHARACTER 2
     ITEM R_OVERLOADED_PD_FLAG TYPE IS CHARACTER 1
```

```
RECORD NAME IS MACHINE_TYPE
*   Within areas    : CONFIG
*   Owner of sets   : IS_REPRESENTED_BY
*                     IS_USED_AS
*   Member of sets : ALL_MACHINE_TYPE
    ITEM MT_MACH_TYPE TYPE IS CHARACTER 8
    ITEM MT_MACH_TYPE_DESC TYPE IS CHARACTER 16

RECORD NAME IS RESOURCE_MACHINE_TYPE
*   Within areas    : CONFIG
*   Owner of sets   : CONSISTS_OF_MI
*   Member of sets : ALL_RESOURCE_MACHINE_TYPE
*                     HAS
*                     IS_USED_AS
    GROUP RMT_CALC_KEY
      ITEM RMT_RES_ID TYPE IS CHARACTER 8
      ITEM RMT_MACH_TYPE TYPE IS CHARACTER 8
    ENDGROUP RMT_CALC_KEY
    ITEM RMT_Q_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_EFFECT_RATE TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_Q_TIME_VAL_LIM TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_EFFIC TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_NUM_MACHINES TYPE IS PACKED DECIMAL 3
    ITEM RMT_Q_TIME_COMP_FACTOR TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_RATIO_RUN_SETUP TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_AVG_MACH_TYPE_EFFIC TYPE IS PACKED DECIMAL 2
    ITEM RMT_AVG_SETUP_EFFECT TYPE IS PACKED DECIMAL 2
    ITEM RMT_AVG_SETUP_LOSS_RATE TYPE IS PACKED DECIMAL 2
    ITEM RMT_AVG_MACH_TYPE_EFFEC TYPE IS PACKED DECIMAL 2
    ITEM RMT_RUN_TIME_VAL_LIM TYPE IS PACKED DECIMAL 8
    ITEM RMT_SETUP_TIME_VAL_LIM TYPE IS PACKED DECIMAL 8
    ITEM RMT_RES_UTIL_VAL_LIM TYPE IS PACKED DECIMAL 8

RECORD NAME IS MACHINE_INSTANCE
*   Within areas    : CONFIG
*   Member of sets : MAY_EXIST_AS
*                     IS_REPRESENTED_BY
*                     CONSISTS_OF_MI
    ITEM MI_MACH_SER_NUM TYPE IS CHARACTER 8
    ITEM MI_MACH_RES_ID TYPE IS CHARACTER 8
    ITEM MI_MACH_TYPE TYPE IS CHARACTER 8

RECORD NAME IS PART
*   Within areas    : PROCPLN1
*   Owner of sets   : HAS_ROUTING
*                     HAS_PART_HISTORY
*   Member of sets : ALL_PART
    ITEM P_PART_NUM TYPE IS CHARACTER 24
    ITEM P_PART_DESC TYPE IS CHARACTER 32
    ITEM P_OVER_UNDER_QTY TYPE IS PACKED DECIMAL 8
    ITEM P_PRIME_RESP TYPE IS CHARACTER 8
    ITEM P_SCRAP_VAR_PART TYPE IS PACKED DECIMAL 8

RECORD NAME IS PLANNED_ROUTING
*   Within areas    : PROCPLN1
*   Owner of sets   : IS_COMPOSED_OF
*   Member of sets : HAS_ROUTING
```

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    ITEM PL_ROUTING_NUM TYPE IS UNSIGNED NUMERIC 2
    ITEM PL_EFFECTIVITY_DATE TYPE IS CHARACTER 10
    ITEM PL_REVISION_DATE TYPE IS CHARACTER 10
    ITEM PL_REVISION_NUM TYPE IS UNSIGNED NUMERIC 4
    ITEM PL_RAW_MATL_ITEM_ID TYPE IS CHARACTER 24
    ITEM PL_RAW_MATL_DESC TYPE IS CHARACTER 32
    ITEM PL_RAW_MATL_QTY_PER TYPE IS UNSIGNED NUMERIC 2
    ITEM PL_RESP_DEPT TYPE IS CHARACTER 8
    ITEM PL_ORIGIN_LOCATION TYPE IS CHARACTER 8

RECORD NAME IS ROUTING_OPERATION
*   Within areas    : PROCPLN2
*   Owner of sets   : MAY_BE_REPLACED_BY
*                     HAS_ROH
*   Member of sets : IS_COMPOSED_OF
    ITEM RO_OPER_NUM TYPE IS UNSIGNED NUMERIC 4
    ITEM RO_OPER_DESC TYPE IS CHARACTER 15
    ITEM RO_DEPT TYPE IS CHARACTER 8
    ITEM RO_MACH_TYPE TYPE IS CHARACTER 8
    ITEM RO_STD_SETUP_HOURS TYPE IS PACKED DECIMAL 8 -3
    ITEM RO_STD_HOURS_PER_OPER TYPE IS PACKED DECIMAL 8 -3
    ITEM RO_PER_CODE TYPE IS UNSIGNED NUMERIC 1
    ITEM RO_REQED_TOOL_KIT_ID TYPE IS CHARACTER 8
    ITEM RO_NUM_TOOL_KITS_AVAIL TYPE IS UNSIGNED NUMERIC 2
    ITEM RO_SKILL_REQMT TYPE IS CHARACTER 8
    ITEM RO_SKILL_DESC TYPE IS CHARACTER 15
    ITEM RO_NUM_SKILLED_EMP_NEEDED TYPE IS UNSIGNED NUMERIC 2
    ITEM RO_PROCESS_SPEC TYPE IS CHARACTER 80 OCCURS 4 TIMES

RECORD NAME IS ALTERNATE_OPERATION
*   Within areas    : PROCPLN2
*   Owner of sets   : MAY_ALSO_REQUIRE
*   Member of sets : MAY_BE_REPLACED_BY
    ITEM AO_ALT_OPER_NUM TYPE IS CHARACTER 4
    ITEM AO_OPER_DESC TYPE IS CHARACTER 15
    ITEM AO_DEPT TYPE IS CHARACTER 8
    ITEM AO_MACH_TYPE TYPE IS CHARACTER 8
    ITEM AO_STD_SETUP_HOURS TYPE IS PACKED DECIMAL 8 -3
    ITEM AO_STD_HOURS_PER_OPER TYPE IS PACKED DECIMAL 8 -3
    ITEM AO_PER_CODE TYPE IS UNSIGNED NUMERIC 1
    ITEM AO_REQED_TOOL_KIT_ID TYPE IS CHARACTER 8
    ITEM AO_NUM_TOOL_KITS_AVAIL TYPE IS UNSIGNED NUMERIC 2
    ITEM AO_SKILL_REQMT TYPE IS CHARACTER 8
    ITEM AO_SKILL_DESC TYPE IS CHARACTER 15
    ITEM AO_NUM_SKILLED_EMP_NEEDED TYPE IS UNSIGNED NUMERIC 2
    ITEM AO_PROCESS_SPEC TYPE IS CHARACTER 80 OCCURS 4 TIMES

RECORD NAME IS CONTINGENCY_OPERATION
*   Within areas    : PROCPLN2
*   Member of sets : MAY_ALSO_REQUIRE
    ITEM CO_CONT_OPER_NUM TYPE IS CHARACTER 4
    ITEM CO_OPER_DESC TYPE IS CHARACTER 15
    ITEM CO_DEPT TYPE IS CHARACTER 8
    ITEM CO_MACH_TYPE TYPE IS CHARACTER 8
    ITEM CO_STD_SETUP_HOURS TYPE IS PACKED DECIMAL 8 -3
    ITEM CO_STD_HOURS_PER_OPER TYPE IS PACKED DECIMAL 8 -3
    ITEM CO_PER_CODE TYPE IS UNSIGNED NUMERIC 1
```

```
    ITEM CO_REQED_TDOL_KIT_ID TYPE IS CHARACTER 8
    ITEM CO_NUM_TODL_KITS_AVAIL TYPE IS UNSIGNED NUMERIC 2
    ITEM CO_SKILL_REQMT TYPE IS CHARACTER 8
    ITEM CO_SKILL_DESC TYPE IS CHARACTER 15
    ITEM CO_NUM_SKILLED_EMP_NEEDED TYPE IS UNSIGNED NUMERIC 2
    ITEM CO_PROCESS_SPEC TYPE IS CHARACTER 80 OCCURS 4 TIMES

RECORD NAME IS TRANSACTION
*   Within areas    : CONFIG
*   Owner of sets   : IS_MADE_UP_OF
*                     IS_A
*                     IS_EXECUTED_AFTER
*   Member of sets : ALL_TRANSACTION
    ITEM T_TRAN_ID TYPE IS CHARACTER 6
    ITEM T_BUSY_FLAG TYPE IS CHARACTER 1
    ITEM T_TRAN_DESC TYPE IS CHARACTER 40
    ITEM T_USER_ID TYPE IS CHARACTER 12
    ITEM T_START_DATE TYPE IS CHARACTER 10
    ITEM T_START_TIME TYPE IS CHARACTER 8
    ITEM T_END_DATE TYPE IS CHARACTER 10
    ITEM T_END_TIME TYPE IS CHARACTER 8
    ITEM T_INFO_BLOCK TYPE IS CHARACTER 250

RECORD NAME IS PRIOR_TRANSACTION
*   Within areas    : CONFIG
          of sets : IS_A
*                     IS_EXECUTED_AFTER
    ITEM PT_TRAN_ID TYPE IS CHARACTER 6
    ITEM PT_MISC_INFO TYPE IS CHARACTER 30

RECORD NAME IS ACTIVITY
*   Within areas    : CONFIG
*   Owner of sets   : MAY_BE_PERFORMED_AS
*   Member of sets : IS_MADE_UP_OF
    ITEM A_ACTIVITY_ID TYPE IS CHARACTER 6
    ITEM A_STATUS TYPE IS CHARACTER 1
    ITEM A_DESC TYPE IS CHARACTER 40
    ITEM A_MISC_INFO TYPE IS CHARACTER 40
    ITEM A_NUM_SUBPROC TYPE IS PACKED DECIMAL 3

RECORD NAME IS SUBPROCESS_ACTIVITY
*   Within areas    : CONFIG
*   Member of sets : MAY_BE_PERFORMED_AS
    ITEM SA_SUBPROCESS_ID TYPE IS UNSIGNED NUMERIC 3
    ITEM SA_ACTIVITY_ID TYPE IS CHARACTER 6
    ITEM SA_STATUS TYPE IS CHARACTER 1
    ITEM SA_DESC TYPE IS CHARACTER 40
    ITEM SA_MISC_INFO TYPE IS CHARACTER 60

RECORD NAME IS PLANNING_PERIOD
*   Within areas    : CONFIG
*   Owner of sets   : MAY_BE_SPECIFIED_BY
*   Member of sets : ALL_PLANNING_PERIOD
    ITEM PP_PERIOD_ID TYPE IS CHARACTER 10
    ITEM PP_GREG_DATE TYPE IS CHARACTER 10
    ITEM PP_FISCAL_YR TYPE IS CHARACTER 10
    ITEM PP_FISCAL_QTR TYPE IS CHARACTER 10
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    ITEM PP_FISCAL_MO TYPE IS CHARACTER 10
    ITEM PP_FISCAL_WK TYPE IS CHARACTER 10
    ITEM PP_MDAY_NUM TYPE IS CHARACTER 6
    ITEM PP_GREG_ST_DT TYPE IS CHARACTER 10
    ITEM PP_GREG_END_DT TYPE IS CHARACTER 10
    ITEM PP_SHUT_DOWN_FLAG TYPE IS CHARACTER 1

RECORD NAME IS M_DAY
*   Within areas    : CONFIG
*   Member of sets : MAY_BE_SPECIFIED_BY
    ITEM MD_MDAY_NUM TYPE IS CHARACTER 6
    ITEM MD_GREG_DATE TYPE IS CHARACTER 10
    ITEM MD_FISCAL_YR TYPE IS CHARACTER 10
    ITEM MD_FISCAL_QTR TYPE IS CHARACTER 10
    ITEM MD_FISCAL_MO TYPE IS CHARACTER 10
    ITEM MD_FISCAL_WK TYPE IS CHARACTER 10

RECORD NAME IS GLOBAL_PARAMETER
*   Within areas    : CONFIG
*   Member of sets : ALL_GLOBAL_PARAMETER
    ITEM GP_ID TYPE IS CHARACTER 4
    ITEM GP_M_DAY_UPLIM TYPE IS CHARACTER 4
    ITEM GP_FW_BEGIN_DAY TYPE IS CHARACTER 1
    ITEM GP_PREV_FY_END TYPE IS CHARACTER 2
    GROUP GP_MONTH_ARRAY
      ITEM GP_FWMONTHS TYPE IS CHARACTER 1 OCCURS 12 TIMES
    ENDGROUP GP_MONTH_ARRAY
    ITEM GP_SUM_FW_BRKDWN TYPE IS CHARACTER 2
    ITEM GP_MAX_PART_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_MOVE_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_RMT_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_RO_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_EARLIEST_START_DT_ALL TYPE IS CHARACTER 10
    ITEM GP_LATEST_REQUIRED_DATE_ALL TYPE IS CHARACTER 10
    ITEM GP_MISSING_ROUTING_COUNT TYPE IS PACKED DECIMAL 4
    ITEM GP_MISSING_ROUTING_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_MISSING_MOVE_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_MISSING_QUEUE_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_SCHEDULE_PROB_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_PART_LEAD_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_MOVE_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_Q_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_PRI_METHOD_1 TYPE IS UNSIGNED NUMERIC 1
    ITEM GP_PRI_METHOD_2 TYPE IS UNSIGNED NUMERIC 1

RECORD NAME IS PART_HISTORY
*   Within areas    : PROCPLN1
*   Owner of sets   : HAS_PHS
*   Member of sets : HAS_PART_HISTORY
    ITEM PH_PART_NUM TYPE IS CHARACTER 24
    ITEM PH_NUM_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM PH_MAX_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM PH_NUM_OF_HIST_OCCUR TYPE IS PACKED DECIMAL 5
    ITEM PH_AVG_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
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        ITEM PH_AVG_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
        ITEM PH_AVG_PLAN_QTY_VAR TYPE IS PACKED DECIMAL 10 -2

    RECORD NAME IS PART_HISTORY_SAMPLE
    *   Within areas    : PROCPLN1
    *   Member of sets  : HAS_PHS
        ITEM PHS_PART_NUM TYPE IS CHARACTER 24
        ITEM PHS_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
        ITEM PHS_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
        ITEM PHS_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
        ITEM PHS_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
        ITEM PHS_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM PHS_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
        ITEM PHS_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
        ITEM PHS_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
        ITEM PHS_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM PHS_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM PHS_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM PHS_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM PHS_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
        ITEM PHS_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
        ITEM PHS_PLAN_QTY_VAR TYPE IS PACKED DECIMAL 10 -2
        ITEM PHS_ACT_OPER_START_DATE TYPE IS CHARACTER 10
        ITEM PHS_ACT_OPER_COMP_DATE TYPE IS CHARACTER 10
        ITEM PHS_REQUIRED_DATE TYPE IS CHARACTER 10

    RECORD NAME IS ROUTING_OPERATION_HISTORY
    *   Within areas    : PROCPLN2
    *   Owner of sets   : HAS_ROHS
    *   Member of sets  : HAS_ROH
        ITEM ROH_ROUTING_NUM TYPE IS PACKED DECIMAL 2
        ITEM ROH_OPER_NUM TYPE IS CHARACTER 4
        ITEM ROH_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
        ITEM ROH_MAX_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
        ITEM ROH_NUM_OF_HIST_OCCUR TYPE IS PACKED DECIMAL 5
        ITEM ROH_AVG_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
        ITEM ROH_AVG_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
        ITEM ROH_AVG_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
        ITEM ROH_AVG_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
        ITEM ROH_AVG_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
        ITEM ROH_AVG_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
        ITEM ROH_AVG_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
        ITEM ROH_AVG_PLAN_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM ROH_AVG_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
        ITEM ROH_AVG_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM ROH_AVG_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
        ITEM ROH_AVG_ACT_CLOCK_TIME TYPE IS PACKED DECIMAL 10 -2
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    ITEM ROH_AVG_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_PLAN_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS ROUTING_OPERATION_HISTORY_SAMPL
*   Within areas    : PROCPLN2
*   Member of sets : HAS_ROHS
    ITEM ROHS_ROUTING_NUM TYPE IS PACKED DECIMAL 2
    ITEM ROHS_OPER_NUM TYPE IS CHARACTER 4
    ITEM ROHS_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
    ITEM ROHS_IOLE_TIME_OCC TYPE IS PACKED DECIMAL 10 -2
    ITEM ROHS_ACT_CLOCK_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM ROHS_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
    ITEM ROHS_ACT_SETUP_TIME_REP TYPE IS PACKEO DECIMAL 10 -2
    ITEM ROHS_PLAN_QUEUE_TIME TYPE IS PACKED OECIMAL 10 -2
    ITEM ROHS_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM ROHS_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM ROHS_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM ROHS_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
    ITEM ROHS_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
    ITEM ROHS_PLAN_MOVE_TIME TYPE IS PACKEO OECIMAL 10 -2
    ITEM ROHS_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM ROHS_PLAN_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM ROHS_PLAN_SETUP_LOSS TYPE IS PACKEO DECIMAL 10 -2
    ITEM ROHS_MACH_UTIL TYPE IS PACKED DECIMAL 10 -2
    ITEM ROHS_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM ROHS_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM ROHS_REOUIRED_DATE TYPE IS CHARACTER 10
    ITEM ROHS_OPER_COMP_DATE TYPE IS CHARACTER 10
    ITEM ROHS_OPER_START_DATE TYPE IS CHARACTER 10

SET NAME IS ALL_LEVEL
*   Owner is SYSTEM
*   Member is LEVEL
*       Insertion is AUTOMATIC retention is FIXEO

SET NAME IS ALL_RESOURCE
*   Owner is SYSTEM
*   Member is RESOURCE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_MACHINE_TYPE
*   Owner is SYSTEM
*   Member is MACHINE_TYPE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_PART
*   Owner is SYSTEM
*   Member is PART
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_RESOURCE_MACHINE_TYPE
*   Owner is SYSTEM
*   Member is RESOURCE_MACHINE_TYPE
*       Insertion is AUTOMATIC retention is FIXEO
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SET NAME IS ALL_PLANNING_PERIOD
*   Owner is SYSTEM
*   Member is PLANNING_PERIOD
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_TRANSACTION
*   Owner is SYSTEM
*   Member is TRANSACTION
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_GLOBAL_PARAMETER
*   Owner is SYSTEM
*   Member is GLOBAL_PARAMETER
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS CONTAINS_R
*   Owner is LEVEL
*   Member is RESOURCE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS SEL_FOR_RELEASE
*   Owner is LEVEL
*   Member is RESOURCE
*       Insertion is MANUAL retention is OPTIONAL
*       Order is LAST

SET NAME IS MAY_EXIST_AS
*   Owner is RESOURCE
*   Member is MACHINE_INSTANCE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS
*   Owner is RESOURCE
*   Member is RESOURCE_MACHINE_TYPE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_REPRESENTED_BY
*   Owner is MACHINE_TYPE
*   Member is MACHINE_INSTANCE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_USED_AS
*   Owner is MACHINE_TYPE
*   Member is RESOURCE_MACHINE_TYPE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS CONSISTS_OF_MI
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is MACHINE_INSTANCE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST
```

```
SET NAME IS HAS_ROUTING
*   Owner is PART
*   Member is PLANNED_ROUTING
*       Insertion is AUTOMATIC retention is FIXED
*       Order is SORTED BY
*           ASCENDING  PL_ROUTING_NUM
*           Duplicates are NOT ALLOWED

SET NAME IS HAS_PART_HISTORY
*   Owner is PART
*   Member is PART_HISTORY
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_PHS
*   Owner is PART_HISTORY
*   Member is PART_HISTORY_SAMPLE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_COMPOSED_OF
*   Owner is PLANNED_ROUTING
*   Member is ROUTING_OPERATION
*       Insertion is AUTOMATIC retention is FIXED
*       Order is SORTED BY
*           ASCENDING  RO_OPER_NUM
*           Duplicates are NOT ALLOWED

SET NAME IS MAY_BE_REPLACED_BY
*   Owner is ROUTING_OPERATION
*   Member is ALTERNATE_OPERATION
*       Insertion is AUTOMATIC retention is FIXED
*       Order is SORTED BY
*           ASCENDING  AO_ALT_OPER_NUM
*           Duplicates are NOT ALLOWED

SET NAME IS HAS_ROH
*   Owner is ROUTING_OPERATION
*   Member is ROUTING_OPERATION_HISTORY
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_ROHS
*   Owner is ROUTING_OPERATION_HISTORY
*   Member is ROUTING_OPERATION_HISTORY_SAMPL
*       Insertion is MANUAL retention is OPTIONAL
*       Order is LAST

SET NAME IS MAY_ALSO_REQUIRE
*   Owner is ALTERNATE_OPERATION
*   Member is CONTINGENCY_OPERATION
*       Insertion is AUTOMATIC retention is FIXED
*       Order is SORTED BY
*           ASCENDING  CO_CONT_OPER_NUM
*           Duplicates are NOT ALLOWED
```

```
SET NAME IS MAY_BE_SPECIFIED_BY
*   Owner is PLANNING_PERIOD
*   Member is M_DAY
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_MADE_UP_OF
*   Owner is TRANSACTION
*   Member is ACTIVITY
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is NEXT

SET NAME IS IS_A
*   Owner is TRANSACTION
*   Member is PRIOR_TRANSACTION
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_EXECUTED_AFTER
*   Owner is TRANSACTION
*   Member is PRIOR_TRANSACTION
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS MAY_BE_PERFORMED_AS
*   Owner is ACTIVITY
*   Member is SUBPROCESS_ACTIVITY
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST
```

APPENDIX G

PP&CS DATA-BASE SUBSCHEMA TOTSUBRP LISTING

```
*****************************************************************
*                                                               *
*  THIS IS A SUBSCHEMA LISTING FOR TOTSUB_RP                    *
*                                                               *
*****************************************************************

SUBSCHEMA NAME IS TOTSUB_RP FOR TOTPPCS SCHEMA
*    Subschema version number :  9-DEC-1983 19:54:23.30
*    Schema version number :  9-OEC-1983 19:23:07.72 (1)

REALM PROCPLN1
     IS PROCPLN1
REALM PROCPLN2
     IS PROCPLN2
REALM FACLOAO
     IS FACLOAD
REALM CONFIG
     IS CONFIG

RECORO NAME IS LEVEL
*    Within areas    : CONFIG
*    Owner of sets   : CONTAINS_R
*                      SEL_FOR_RELEASE
*    Member of sets : ALL_LEVEL
     ITEM L_LEV_NUM TYPE IS CHARACTER 2
     ITEM L_LEV_ID TYPE IS CHARACTER 8
     ITEM L_LEV_DPT_CD TYPE IS CHARACTER 8
     ITEM L_LEV_DESC TYPE IS CHARACTER 24

RECORD NAME IS RESOURCE
*    Within areas    : CONFIG
*    Owner of sets   : HAS
*                       IS_RESPONSIBLE_FOR
*    Member of sets : ALL_RESOURCE
*                      CONTAINS_R
*                      SEL_FOR_RELEASE
     ITEM R_RES_ID TYPE IS CHARACTER 8
     ITEM R_LEV_ID TYPE IS CHARACTER 8
     ITEM R_LEV_DPT_CD TYPE IS CHARACTER 8
     ITEM R_REL_LOAD_LOWER_LIM TYPE IS PACKED DECIMAL 8
     ITEM R_REL_LOAD TYPE IS PACKED DECIMAL 10 -2
     ITEM R_REL_LOAD_UP_LIM TYPE IS PACKEO OECIMAL 8
     ITEM R_INWORK_DATE_REL_INT TYPE IS PACKED DECIMAL 8
     ITEM R_AUTO_REL_IND TYPE IS CHARACTER 1
     ITEM R_TOT_ACCUM_WORK TYPE !S PACKEO OECIMAL 10 -2
     ITEM R_RES_LOAD_UNIT_HOURS TYPE IS PACKED DECIMAL 10 -2
     ITEM R_DISP_LOAD TYPE IS PACKED DECIMAL 10 -2
     ITEM R_CURRENT_LOAD TYPE IS PACKED DECIMAL 10 -2
     ITEM R_WORK_TO_BE_RELEASED TYPE IS PACKED DECIMAL 8
     ITEM R_ACT_REL_OTY TYPE IS PACKED DECIMAL 10 -2
     ITEM R_RES_OESC TYPE IS CHARACTER 16
     ITEM R_PROO_RATE_TRACKING_SIG TYPE IS CHARACTER 1
     ITEM R_RES_EFFEC TYPE IS PACKED DECIMAL 2
     ITEM R_RES_EFFIC TYPE IS PACKED DECIMAL 2
     ITEM R_RES_CAP_UTIL TYPE IS PACKED DECIMAL 2
     ITEM R_RES_SETUP_EFFIC TYPE IS PACKED DECIMAL 2
     ITEM R_RES_TOT_SETUP_LOSS_RATE TYPE IS PACKED DECIMAL 2
```

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    ITEM R_LEV_NUM TYPE IS CHARACTER 2
    ITEM R_OVERLOADED_PD_FLAG TYPE IS CHARACTER 1

RECORD NAME IS MACHINE_TYPE
*   Within areas    : CONFIG
*   Owner of sets   : IS_USED_AS
*   Member of sets  : ALL_MACHINE_TYPE
    ITEM MT_MACH_TYPE TYPE IS CHARACTER 8
    ITEM MT_MACH_TYPE_DESC TYPE IS CHARACTER 16

RECORD NAME IS RESOURCE_MACHINE_TYPE
*   Within areas    : CONFIG
*   Owner of sets   : HAS_RMTH
*   Member of sets  : ALL_RESOURCE_MACHINE_TYPE
*                     HAS
*                     IS_USED_AS
    GROUP RMT_CALC_KEY
      ITEM RMT_RES_ID TYPE IS CHARACTER 8
      ITEM RMT_MACH_TYPE TYPE IS CHARACTER 8
    ENDGROUP RMT_CALC_KEY
    ITEM RMT_Q_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_EFFECT_RATE TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_Q_TIME_VAL_LIM TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_EFFIC TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_NUM_MACHINES TYPE IS PACKED DECIMAL 3
    ITEM RMT_Q_TIME_COMP_FACTOR TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_RATIO_RUN_SETUP TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_AVG_MACH_TYPE_EFFIC TYPE IS PACKED DECIMAL 2
    ITEM RMT_AVG_SETUP_EFFECT TYPE IS PACKED DECIMAL 2
    ITEM RMT_AVG_SETUP_LOSS_RATE TYPE IS PACKED DECIMAL 2
    ITEM RMT_AVG_MACH_TYPE_EFFEC TYPE IS PACKED DECIMAL 2
    ITEM RMT_RUN_TIME_VAL_LIM TYPE IS PACKED DECIMAL 8
    ITEM RMT_SETUP_TIME_VAL_LIM TYPE IS PACKED DECIMAL 8
    ITEM RMT_RES_UTIL_VAL_LIM TYPE IS PACKED DECIMAL 8

RECORD NAME IS PART
*   Within areas    : PROCPLN1
*   Owner of sets   : HAS_ROUTING
*                     HAS_BEEN_ORDERED_IN
*                     HAS_PART_HISTORY
*   Member of sets  : ALL_PART
    ITEM P_PART_NUM TYPE IS CHARACTER 24
    ITEM P_PART_DESC TYPE IS CHARACTER 32
    ITEM P_OVER_UNDER_QTY TYPE IS PACKED DECIMAL 8
    ITEM P_PRIME_RESP TYPE IS CHARACTER 8
    ITEM P_SCRAP_VAR_PART TYPE IS PACKED DECIMAL 8

RECORD NAME IS PLANNED_ROUTING
*   Within areas    : PROCPLN1
*   Owner of sets   : IS_COMPOSED_OF
*   Member of sets  : HAS_ROUTING
    ITEM PL_ROUTING_NUM TYPE IS UNSIGNED NUMERIC 2
    ITEM PL_EFFECTIVITY_DATE TYPE IS CHARACTER 10
    ITEM PL_REVISION_DATE TYPE IS CHARACTER 10
    ITEM PL_REVISION_NUM TYPE IS UNSIGNED NUMERIC 4
    ITEM PL_RAW_MATL_ITEM_ID TYPE IS CHARACTER 24
    ITEM PL_RAW_MATL_DESC TYPE IS CHARACTER 32
```

```
      ITEM PL_RAW_MATL_QTY_PER TYPE IS UNSIGNED NUMERIC 2
      ITEM PL_RESP_OEPT TYPE IS CHARACTER 8
      ITEM PL_ORIGIN_LOCATION TYPE IS CHARACTER 8

RECORO NAME IS ROUTING_OPERATION
*     Within areas    : PROCPLN2
*     Owner of sets   : HAS_LU
*                       HAS_ROH
*     Member of sets  : IS_COMPOSED_OF
      ITEM RO_OPER_NUM TYPE IS UNSIGNED NUMERIC 4
      ITEM RO_OPER_OESC TYPE IS CHARACTER 15
      ITEM RO_DEPT TYPE IS CHARACTER 8
      ITEM RO_MACH_TYPE TYPE IS CHARACTER 8
      ITEM RO_STD_SETUP_HOURS TYPE IS PACKEO OECIMAL 8 -3
      ITEM RO_STO_HOURS_PER_OPER TYPE IS PACKED DECIMAL 8 -3
      ITEM RO_PER_CODE TYPE IS UNSIGNED NUMERIC 1
      ITEM RO_REQED_TOOL_KIT_ID TYPE IS CHARACTER 8
      ITEM RO_NUM_TOOL_KITS_AVAIL TYPE IS UNSIGNEO NUMERIC 2
      ITEM RO_SKILL_REQMT TYPE IS CHARACTER 8
      ITEM RO_SKILL_DESC TYPE IS CHARACTER 15
      ITEM RO_NUM_SKILLED_EMP_NEEDED TYPE IS UNSIGNED NUMERIC 2
      ITEM RO_PROCESS_SPEC TYPE IS CHARACTER 80 OCCURS 4 TIMES

RECORD NAME IS PRODUCTION_REQUIREMENT
*     Within areas    : FACLOAD
*     Owner of sets   : CONSISTS_OF_LU
*                       CONSOLIDATED_LU
*                       CAN_BE_OESCRIBED_BY
*     Member of sets  : ALL_PRODUCTION_REQUIREMENT
*                       IS_RESPONSIBLE_FOR
*                       HAS_BEEN_ORDERED_IN
      ITEM PR_ORD_NUM TYPE IS CHARACTER 12
      ITEM PR_PART_NUM TYPE IS CHARACTER 24
      ITEM PR_RES_ID TYPE IS CHARACTER 8
      ITEM PR_ORD_QTY TYPE IS PACKED DECIMAL 8 -2
      ITEM PR_REQUIRED_DATE TYPE IS CHARACTER 10
      ITEM PR_STATUS_COOE TYPE IS CHARACTER 8
      ITEM PR_NO_ROUTING_FLAG TYPE IS CHARACTER 1
      ITEM PR_SCHED_PROB_FLAG TYPE IS CHARACTER 1
      ITEM PR_EARL_START_DATE TYPE IS CHARACTER 10
      ITEM PR_ORD_REV_CODE TYPE IS PACKED DECIMAL 2
      ITEM PR_PRIORITY_CODE_1 TYPE IS CHARACTER 8
      ITEM PR_PRIORITY_CODE_2 TYPE IS CHARACTER 8
      ITEM PR_EXPECTED_REL_DATE TYPE IS CHARACTER 10
      ITEM PR_REVISED_ORD_QTY TYPE IS PACKEO DECIMAL 8
      ITEM PR_ACT_REL_DATE TYPE IS CHARACTER 10
      ITEM PR_PLANNED_ORD_QTY TYPE IS PACKED DECIMAL 8 -2
      ITEM PR_SPAN_TIME TYPE IS PACKED DECIMAL 8 -2
      ITEM PR_SUM_RUN_SETUP_TIME TYPE IS PACKED DECIMAL 8 -2
      ITEM PR_CALC_EAR_ST_DT TYPE IS CHARACTER 10
```

```
RECORO NAME IS LDAD_UNIT
*   Within areas    : FACLOAD
*   Owner of sets   : HAS_LOAP
*                     IS_CHARACTERIZEO_BY
*   Member of sets  : HAS_LU
*                     CDNSISTS_OF_LU
*                     CDNSDLIOATED_LU
     ITEM LU_ORO_NUM TYPE IS CHARACTER 12
     ITEM LU_BEGIN_DPER_NUM TYPE IS CHARACTER 4
     ITEM LU_ENO_OPER_NUM TYPE IS CHARACTER 4
     ITEM LU_EARL_ST_DT TYPE IS CHARACTER 10
     ITEM LU_LATE_ST_DT TYPE IS CHARACTER 10
     ITEM LU_EARL_COMPL_DT TYPE IS CHARACTER 10
     ITEM LU_REQUIRED_DATE TYPE IS CHARACTER 10
     ITEM LU_PRIORITY_CODE_1 TYPE IS CHARACTER 8
     ITEM LU_PRIORITY_CDDE_2 TYPE IS CHARACTER 8
     ITEM LU_SLACK_TIME TYPE IS PACKEO OECIMAL 6 -2
     ITEM LU_MOVE_TIME TYPE IS PACKED OECIMAL 6 -2
     ITEM LU_QUEUE_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_SETUP_TIME TYPE IS PACKEO DECIMAL 6 -2
     ITEM LU_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_COMPRES_FLAG TYPE IS CHARACTER 1
     ITEM LU_RES_ID TYPE IS CHARACTER 8
     ITEM LU_MACH_TYPE TYPE IS CHARACTER 8
     ITEM LU_STATUS TYPE IS CHARACTER 8
     ITEM LU_TOT_NUM_SEG TYPE IS PACKED DECIMAL 2
     ITEM LU_MOD_FLAG TYPE IS CHARACTER 1
     ITEM LU_PREV_RES TYPE IS CHARACTER 8
     ITEM LU_PREV_MACH_TYPE TYPE IS CHARACTER 8
     ITEM LU_SLACK_TIME_USED_TO_MOVE TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_SPEC_START_DATE TYPE IS CHARACTER 10
     ITEM LU_SPEC_COMP_DATE TYPE IS CHARACTER 10
     ITEM LU_CALC_ST_OT TYPE IS CHARACTER 10
     ITEM LU_SEQUENCE_NUM TYPE IS UNSIGNEO NUMERIC 4
     ITEM LU_ALT_OPER_FLAG TYPE IS CHARACTER 1
     ITEM LU_ALT_OPER_NUM TYPE IS CHARACTER 4
     ITEM LU_COMP_Q_TIME TYPE IS PACKEO DECIMAL 6 -2
     ITEM LU_COMP_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_OPER_SPAN_TIME TYPE IS PACKEO OECIMAL 6 -2
     ITEM LU_CHECK_CDUNTER TYPE IS PACKED DECIMAL 8
     ITEM LU_PARALLEL_PROC TYPE IS CHARACTER 1
     ITEM LU_ORO_QTY TYPE IS PACKED DECIMAL 10 -2
     ITEM LU_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
     ITEM LU_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS TRANSACTIDN
*   Within areas    : CDNFIG
*   Owner of sets   : IS_MADE_UP_OF
*                     IS_A
*                     IS_EXECUTEO_AFTER
*   Member of sets  : ALL_TRANSACTION
     ITEM T_TRAN_ID TYPE IS CHARACTER 6
     ITEM T_BUSY_FLAG TYPE IS CHARACTER 1
     ITEM T_TRAN_DESC TYPE IS CHARACTER 40
     ITEM T_USER_ID TYPE IS CHARACTER 12
     ITEM T_START_DATE TYPE IS CHARACTER 10
     ITEM T_START_TIME TYPE IS CHARACTER 8
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    ITEM T_END_DATE TYPE IS CHARACTER 10
    ITEM T_END_TIME TYPE IS CHARACTER 8
    ITEM T_INFO_BLOCK TYPE IS CHARACTER 250

RECORD NAME IS PRIOR_TRANSACTION
*   Within areas    : CONFIG
*   Member of sets : IS_A
*                    IS_EXECUTED_AFTER
    ITEM PT_TRAN_ID TYPE IS CHARACTER 6
    ITEM PT_MISC_INFO TYPE IS CHARACTER 30

RECORD NAME IS ACTIVITY
*   Within areas    : CONFIG
*   Owner of sets   : MAY_BE_PERFORMED_AS
*   Member of sets : IS_MADE_UP_OF
    ITEM A_ACTIVITY_ID TYPE IS CHARACTER 6
    ITEM A_STATUS TYPE IS CHARACTER 1
    ITEM A_DESC TYPE IS CHARACTER 40
    ITEM A_MISC_INFO TYPE IS CHARACTER 40
    ITEM A_NUM_SUBPROC TYPE IS PACKED DECIMAL 3

RECORD NAME IS SUBPROCESS_ACTIVITY
*   Within areas    : CONFIG
*   Member of sets : MAY_BE_PERFORMED_AS
    ITEM SA_SUBPROCESS_ID TYPE IS UNSIGNED NUMERIC 3
    ITEM SA_ACTIVITY_ID TYPE IS CHARACTER 6
    ITEM SA_STATUS TYPE IS CHARACTER 1
    ITEM SA_DESC TYPE IS CHARACTER 40
    ITEM SA_MISC_INFO TYPE IS CHARACTER 60

RECORD NAME IS MOVE_TIME
*   Within areas    : FACLOAD
*   Owner of sets   : HAS_MOVE_HISTORY
*   Member of sets : ALL_MOVE_TIME
    GROUP MV_CALC_KEY
      ITEM MV_START_RES_ID TYPE IS CHARACTER 8
      ITEM MV_START_MACH_TYPE_ID TYPE IS CHARACTER 8
      ITEM MV_END_RES_ID TYPE IS CHARACTER 8
      ITEM MV_END_MACH_TYPE_ID TYPE IS CHARACTER 8
    ENDGROUP MV_CALC_KEY
    ITEM MV_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM MV_MOVE_TIME_COMP_FACTOR TYPE IS PACKED DECIMAL 6 -2
    ITEM MV_MOVE_TIME_VAL_LIM TYPE IS PACKED DECIMAL 6 -2

RECORD NAME IS PLANNING_PERIOD
*   Within areas    : CONFIG
*   Owner of sets   : MAY_BE_SPECIFIED_BY
*   Member of sets : ALL_PLANNING_PERIOD
    ITEM PP_PERIOD_ID TYPE IS CHARACTER 10
    ITEM PP_GREG_DATE TYPE IS CHARACTER 10
    ITEM PP_FISCAL_YR TYPE IS CHARACTER 10
    ITEM PP_FISCAL_QTR TYPE IS CHARACTER 10
    ITEM PP_FISCAL_MO TYPE IS CHARACTER 10
    ITEM PP_FISCAL_WK TYPE IS CHARACTER 10
    ITEM PP_MDAY_NUM TYPE IS CHARACTER 6
    ITEM PP_GREG_ST_DT TYPE IS CHARACTER 10
```

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    ITEM PP_GREG_END_DT TYPE IS CHARACTER 10
    ITEM PP_SHUT_DDWN_FLAG TYPE IS CHARACTER 1

RECDRD NAME IS M_DAY
*   Within areas    : CONFIG
*   Member of sets : MAY_BE_SPECIFIED_BY
    ITEM MD_MDAY_NUM TYPE IS CHARACTER 6
    ITEM MD_GREG_DATE TYPE IS CHARACTER 10
    ITEM MD_FISCAL_YR TYPE IS CHARACTER 10
    ITEM MD_FISCAL_QTR TYPE IS CHARACTER 10
    ITEM MD_FISCAL_MO TYPE IS CHARACTER 10
    ITEM MD_FISCAL_WK TYPE IS CHARACTER 10

RECORD NAME IS GLDBAL_PARAMETER
*   Within areas    : CDNFIG
*   Member of sets : ALL_GLDBAL_PARAMETER
    ITEM GP_ID TYPE IS CHARACTER 4
    ITEM GP_M_DAY_UPLIM TYPE IS CHARACTER 4
    ITEM GP_FW_BEGIN_DAY TYPE IS CHARACTER 1
    ITEM GP_PREV_FY_END TYPE IS CHARACTER 2
    GRDUP GP_MONTH_ARRAY
      ITEM GP_FWMONTHS TYPE IS CHARACTER 1 OCCURS 12 TIMES
    ENDGROUP GP_MONTH_ARRAY
    ITEM GP_SUM_FW_BRKDWN TYPE IS CHARACTER 2
    ITEM GP_MAX_PART_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_MOVE_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_RMT_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_RD_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_EARLIEST_START_DT_ALL TYPE IS CHARACTER 10
    ITEM GP_LATEST_REQUIRED_DATE_ALL TYPE IS CHARACTER 10
    ITEM GP_MISSING_RDUTING_CDUNT TYPE IS PACKED DECIMAL 4
    ITEM GP_MISSING_ROUTING_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_MISSING_MOVE_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_MISSING_QUEUE_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_SCHEDULE_PROB_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_PART_LEAD_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_MOVE_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_Q_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_PRI_METHDD_1 TYPE IS UNSIGNED NUMERIC 1
    ITEM GP_PRI_METHDD_2 TYPE IS UNSIGNED NUMERIC 1

RECDRD NAME IS PART_HISTDRY
*   Within areas    : PRDCPLN1
*   Dwner of sets  : HAS_PHS
*   Member of sets : HAS_PART_HISTDRY
    ITEM PH_PART_NUM TYPE IS CHARACTER 24
    ITEM PH_NUM_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM PH_MAX_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM PH_NUM_DF_HIST_OCCUR TYPE IS PACKED DECIMAL 5
    ITEM PH_AVG_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_DPER_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_EFFECT_LDAD_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_SETUP_LDSS TYPE IS PACKED DECIMAL 10 -2
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    ITEM PH_AVG_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_DUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_D_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_PLAN_QTY_VAR TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS PART_HISTORY_SAMPLE
*   Within areas    : PROCPLN1
*   Member of sets : HAS_PHS
    ITEM PHS_PART_NUM TYPE IS CHARACTER 24
    ITEM PHS_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_EFFECT_LDAD_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_SETUP_LDSS TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_SETUP_LDSS TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_PLAN_QTY_VAR TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_OPER_START_DATE TYPE IS CHARACTER 10
    ITEM PHS_ACT_DPER_CDMP_DATE TYPE IS CHARACTER 10
    ITEM PHS_REQUIRED_DATE TYPE IS CHARACTER 10

RECORD NAME IS ROUTING_OPERATION_HISTORY
*   Within areas    : PROCPLN2
*   Owner of sets   : HAS_RDHS
*   Member of sets : HAS_RDH
    ITEM ROH_RDUTING_NUM TYPE IS PACKED DECIMAL 2
    ITEM ROH_OPER_NUM TYPE IS CHARACTER 4
    ITEM RDH_NUM_DF_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM ROH_MAX_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM ROH_NUM_OF_HIST_DCCUR TYPE IS PACKED DECIMAL 5
    ITEM ROH_AVG_ORD_DTY TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM RDH_AVG_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
    ITEM RDH_AVG_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM RDH_AVG_PLAN_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM RDH_AVG_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_ACT_CLOCK_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_ACT_D_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM ROH_AVG_PLAN_DUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
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RECORO NAME IS ROUTING_OPERATION_HISTDRY_SAMPL
*    Within areas    : PROCPLN2
*    Member of sets : HAS_RMTH_OETAIL
*                     HAS_ROHS
     ITEM ROHS_ROUTING_NUM TYPE IS PACKED DECIMAL 2
     ITEM RDHS_OPER_NUM TYPE IS CHARACTER 4
     ITEM ROHS_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
     ITEM RDHS_IDLE_TIME_DCC TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_CLDCK_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_SETUP_LDSS TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_PLAN_QUEUE_TIME TYPE IS PACKEO OECIMAL 10 -2
     ITEM ROHS_ACT_Q_TIME TYPE IS PACKEO DECIMAL 10 -2
     ITEM ROHS_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_RUN_TIME_REP TYPE IS PACKEO DECIMAL 10 -2
     ITEM ROHS_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
     ITEM RDHS_ACT_SCRAP_DPER TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_PLAN_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_PLAN_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_MACH_UTIL TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ORO_QTY TYPE IS PACKEO DECIMAL 10 -2
     ITEM ROHS_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_REQUIRED_DATE TYPE IS CHARACTER 10
     ITEM ROHS_OPER_COMP_OATE TYPE IS CHARACTER 10
     ITEM ROHS_OPER_START_DATE TYPE IS CHARACTER 10

RECORD NAME IS RESOURCE_MACH_TYPE_HISTORY
*    Within areas    : CDNFIG
*    Owner of sets   : HAS_RMTH_DETAIL
*    Member of sets : HAS_RMTH
     ITEM RMTH_RES_ID TYPE IS CHARACTER 8
     ITEM RMTH_MACHINE_TYPE TYPE IS CHARACTER 8
     ITEM RMTH_NUM_DF_SAMPLES TYPE IS PACKED OECIMAL 5
     ITEM RMTH_MAX_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
     ITEM RMTH_NUM_DF_HIST_DCCUR TYPE IS PACKED DECIMAL 5
     ITEM RMTH_AVG_DRD_QTY TYPE IS PACKED OECIMAL 10 -2
     ITEM RMTH_AVG_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_PLAN_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_PLAN_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_PLAN_QUEUE_TIME TYPE IS PACKEO DECIMAL 10 -2
     ITEM RMTH_AVG_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_MACH_UTIL TYPE IS PACKED DECIMAL 10 -2 .
     ITEM RMTH_AVG_IDLE_TIME_OCC TYPE IS PACKEO DECIMAL 10 -2
```

```
RECORD NAME IS LOAD_UNIT_ACTUAL_PERFORMANCE
*   Within areas    : FACLDAD
*   Member of sets : HAS_LDAP
    ITEM LUAP_DRD_NUM TYPE IS CHARACTER 12
    ITEM LUAP_DATE_PERF_REP TYPE IS CHARACTER 10
    ITEM LUAP_SHIFT_PERF_REP TYPE IS CHARACTER 8
    ITEM LUAP_ACT_OPER_START_DATE TYPE IS CHARACTER 10
    ITEM LUAP_ACT_OPER_COMP_DATE TYPE IS CHARACTER 10
    ITEM LUAP_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_MACH_DOWN_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ACT_Q_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ACT_OPER_QTY TYPE IS PACKED DECIMAL 8
    ITEM LUAP_IDLE_TIME_OCC TYPE IS PACKED DECIMAL 8
    ITEM LUAP_RES_UTIL_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_MISS_ACT_VALUE_FLAG TYPE IS CHARACTER 1
    ITEM LUAP_LIM_VIOL_FLAG TYPE IS CHARACTER 1
    ITEM LUAP_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 8
    ITEM LUAP_ACT_CLOCK_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_MACH_UTIL TYPE IS PACKED DECIMAL 2
    ITEM LUAP_START_DATE_ACT_SU TYPE IS CHARACTER 10
    ITEM LUAP_COMPL_DATE_ACT_SU TYPE IS CHARACTER 10
    ITEM LUAP_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 8
    ITEM LUAP_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
    ITEM LUAP_START_RES_ID TYPE IS CHARACTER 8
    ITEM LUAP_START_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM LUAP_END_RES_ID TYPE IS CHARACTER 8
    ITEM LUAP_END_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM LUAP_ADJ_SETUP_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_RUN_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_RES_UTIL_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_Q_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_OPER_QTY TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_IDLE_OCC TYPE IS PACKED DECIMAL 6 -2

RECORD NAME IS MOVE_HISTORY
*   Within areas    : FACLDAD
*   Owner of sets   : HAS_MHS
*   Member of sets : HAS_MOVE_HISTORY
    ITEM MH_START_RES_ID TYPE IS CHARACTER 8
    ITEM MH_START_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM MH_END_RES_ID TYPE IS CHARACTER 8
    ITEM MH_END_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM MH_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM MH_MAX_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM MH_NUM_OF_HIST_OCCUR TYPE IS PACKED DECIMAL 5
    ITEM MH_AVG_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM MH_AVG_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
```

```
RECORD NAME IS MOVE_HISTORY_SAMPLE
*   Within areas    : FACLDAD
*   Member of sets : HAS_MHS
    ITEM MHS_START_RES_ID TYPE IS CHARACTER 8
    ITEM MHS_START_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM MHS_END_RES_ID TYPE IS CHARACTER 8
    ITEM MHS_END_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM MHS_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM MHS_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS LU_STATE
*   Within areas    : FACLOAD
*   Owner of sets  : APPEARS_AS
*   Member of sets : ALL_LU_STATE
    ITEM LUST_STATE_ID TYPE IS CHARACTER 4
    ITEM LUST_STATE_DESC TYPE IS CHARACTER 24

RECORD NAME IS LU_STATE_RELATION
*   Within areas    : FACLOAD
*   Member of sets : IS_CHARACTERIZED_BY
*                    APPEARS_AS
    ITEM LSR_FIELD TYPE IS CHARACTER 4

RECORD NAME IS PR_STATE
*   Within areas    : CDNFIG
*   Owner of sets  : INCLUDES_PR
*   Member of sets : ALL_PR_STATE
    ITEM PRS_PRSTATE_ID TYPE IS CHARACTER 4
    ITEM PRS_PRSTATE_DESC TYPE IS CHARACTER 24

RECORD NAME IS PR_STATE_RELATION
*   Within areas    : CDNFIG
*   Member of sets : CAN_BE_DESCRIBED_BY
*                    INCLUDES_PR
    ITEM PRSR_PRFIELD TYPE IS CHARACTER 4

SET NAME IS ALL_LEVEL
*   Owner is SYSTEM
*   Member is LEVEL
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_RESOURCE
*   Owner is SYSTEM
*   Member is RESOURCE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_MACHINE_TYPE
*   Dwner is SYSTEM
*   Member is MACHINE_TYPE
*       Insertion is AUTDMATIC retention is FIXED

SET NAME IS ALL_PART
*   Owner is SYSTEM
*   Member is PART
*       Insertion is AUTDMATIC retention is FIXED
```

```
SET NAME IS ALL_PROOUCTION_REQUIREMENT
*    Owner is SYSTEM
*    Member is PROOUCTION_REQUIREMENT
*         Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_RESOURCE_MACHINE_TYPE
*    Owner is SYSTEM
*    Member is RESOURCE_MACHINE_TYPE
*         Insertion is AUTOMATIC retention is FIXEO

SET NAME IS ALL_PLANNING_PERIOO
*    Owner is SYSTEM
*    Member is PLANNING_PERIOD
*         Insertion is AUTOMATIC retention is FIXEO

SET NAME IS ALL_TRANSACTION
*    Owner is SYSTEM
*    Member is TRANSACTION
*         Insertion is AUTOMATIC retention is FIXEO

SET NAME IS ALL_GLOBAL_PARAMETER
*    Owner is SYSTEM
*    Member is GLOBAL_PARAMETER
*         Insertion is AUTOMATIC retention is FIXEO

SET NAME IS ALL_MOVE_TIME
*    Owner is SYSTEM
*    Member is MOVE_TIME
*         Insertion is AUTOMATIC retention is FIXEO

SET NAME IS ALL_LU_STATE
*    Owner is SYSTEM
*    Member is LU_STATE
*         Insertion is AUTOMATIC retention is FIXEO

SET NAME IS ALL_PR_STATE
*    Owner is SYSTEM
*    Member is PR_STATE
*         Insertion is AUTOMATIC retention is FIXED

SET NAME IS CONTAINS_R
*    Owner is LEVEL
*    Member is RESOURCE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS SEL_FOR_RELEASE
*    Owner is LEVEL
*    Member is RESOURCE
*         Insertion is MANUAL retention is OPTIONAL
*        Order is LAST

SET NAME IS HAS
*    Owner is RESOURCE
*    Member is RESOURCE_MACHINE_TYPE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST
```

```
SET NAME IS IS_RESPONSIBLE_FOR
*   Owner is RESOURCE
*   Member is PROOUCTION_REQUIREMENT
*        Insertion is MANUAL retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_USEO_AS
*   Owner is MACHINE_TYPE
*   Member is RESOURCE_MACHINE_TYPE
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_RMTH
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is RESOURCE_MACH_TYPE_HISTORY
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_RMTH_OETAIL
*   Owner is RESOURCE_MACH_TYPE_HISTORY
*   Member is ROUTING_OPERATION_HISTORY_SAMPL
*        Insertion is MANUAL retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_ROUTING
*   Owner is PART
*   Member is PLANNEO_ROUTING
*        Insertion is AUTOMATIC retention is FIXEO
*       Order is SORTEO BY
*            ASCENOING  PL_ROUTING_NUM
*            Ouplicates are NOT ALLOWEO

SET NAME IS HAS_BEEN_ORDEREO_IN
*   Owner is PART
*   Member is PROOUCTION_REQUIREMENT
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_PART_HISTORY
*   Owner is PART
*   Member is PART_HISTORY
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_PHS
*   Owner is PART_HISTORY
*   Member is PART_HISTORY_SAMPLE
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_COMPOSEO_OF
*   Owner is PLANNEO_ROUTING
*   Member is ROUTING_OPERATION
*        Insertion is AUTOMATIC retention is FIXEO
*       Order is SORTEO BY
*            ASCENOING  RO_OPER_NUM
*            Ouplicates are NOT ALLOWEO
```

```
SET NAME IS HAS_LU
*   Owner is ROUTING_OPERATION
*   Member is LOAO_UNIT
*        Insertion is MANUAL retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_ROH
*   Owner is ROUTING_OPERATION
*   Member is ROUTING_OPERATION_HISTORY
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_ROHS
*   Owner is ROUTING_OPERATION_HISTORY
*   Member is ROUTING_OPERATION_HISTORY_SAMPL
*        Insertion is MANUAL retention is OPTIONAL
*       Order is LAST

SET NAME IS CONSISTS_OF_LU
*   Owner is PROOUCTION_REQUIREMENT
*   Member is LOAO_UNIT
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is NEXT

SET NAME IS CONSOLIDATED_LU
*   Owner is PROOUCTION_REQUIREMENT
*   Member is LOAO_UNIT
*        Insertion is MANUAL retention is OPTIONAL
*       Order is NEXT

SET NAME IS CAN_BE_OESCRIBEO_BY
*   Owner is PROOUCTION_REQUIREMENT
*   Member is PR_STATE_RELATION
*        Insertion is AUTOMATIC retention is FIXEO
*       Order is LAST

SET NAME IS HAS_LOAP
*   Owner is LOAO_UNIT
*   Member is LOAO_UNIT_ACTUAL_PERFORMANCE
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_CHARACTERIZEO_BY
*   Owner is LOAO_UNIT
*   Member is LU_STATE_RELATION
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS MAY_BE_SPECIFIEO_BY
*   Owner is PLANNING_PERIOO
*   Member is M_OAY
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST
```

```
SET NAME IS INCLUDES_PR
*   Owner is PR_STATE
*   Member is PR_STATE_RELATION
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_MOVE_HISTORY
*   Owner is MOVE_TIME
*   Member is MOVE_HISTORY
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_MHS
*   Owner is MOVE_HISTORY
*   Member is MOVE_HISTORY_SAMPLE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS APPEARS_AS
*   Owner is LU_STATE
*   Member is LU_STATE_RELATION
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_MADE_UP_OF
*   Owner is TRANSACTION
*   Member is ACTIVITY
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is NEXT

SET NAME IS IS_A
*   Owner is TRANSACTION
*   Member is PRIOR_TRANSACTION
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_EXECUTED_AFTER
*   Owner is TRANSACTION
*   Member is PRIOR_TRANSACTION
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS MAY_BE_PERFORMED_AS
*   Owner is ACTIVITY
*   Member is SUBPROCESS_ACTIVITY
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST
```

APPENDIX H

PP&CS DATA-BASE SUBSCHEMA TOTSUBDP LISTING

```
*****************************************************************
*                                                               *
*  THIS LISTING IS FOR SUBSCHEMA TOTSUB_OP                      *
*                                                               *
*****************************************************************
SUBSCHEMA NAME IS TOTSUB_DP FOR TOTPPCS SCHEMA
*    Subschema version number :  9-DEC-1983 19:44:43.54
*    Schema version number :  9-OEC-1983 19:23:07.72 (1)

REALM PROCPLN1
    IS PROCPLN1
REALM FACLOAO
    IS FACLOAD
REALM CONFIG
    IS CONFIG
REALM MIPPAREA
    IS MIPPAREA

RECORD NAME IS LEVEL
*   Within areas    : CONFIG
*   Owner of sets   : CONTAINS_R
*                     SEL_FOR_RELEASE
*   Member of sets : ALL_LEVEL
    ITEM L_LEV_NUM TYPE IS CHARACTER 2
    ITEM L_LEV_ID TYPE IS CHARACTER 8
    ITEM L_LEV_OPT_CO TYPE IS CHARACTER 8
    ITEM L_LEV_OESC TYPE IS CHARACTER 24

RECORD NAME IS RESOURCE
*   Within areas    : CONFIG
*   Owner of sets   : MAY_EXIST_AS
*                     HAS
*                     IS_RESPONSIBLE_FOR
*   Member of sets : ALL_RESOURCE
*                     CONTAINS_R
*                     SEL_FOR_RELEASE
    ITEM R_RES_IO TYPE IS CHARACTER 8
    ITEM R_LEV_ID TYPE IS CHARACTER 8
    ITEM R_LEV_OPT_CD TYPE IS CHARACTER 8
    ITEM R_REL_LOAD_LOWER_LIM TYPE IS PACKEO DECIMAL 8
    ITEM R_REL_LOAO TYPE IS PACKED DECIMAL 10 -2
    ITEM R_REL_LOAD_UP_LIM TYPE IS PACKED OECIMAL 8
    ITEM R_INWORK_DATE_REL_INT TYPE IS PACKED OECIMAL 8
    ITEM R_AUTO_REL_IND TYPE IS CHARACTER 1
    ITEM R_TOT_ACCUM_WORK TYPE IS PACKEO OECIMAL 10 -2
    ITEM R_RES_LOAD_UNIT_HOURS TYPE IS PACKEO OECIMAL 10 -2
    ITEM R_OISP_LOAD TYPE IS PACKED OECIMAL 10 -2
    ITEM R_CURRENT_LOAD TYPE IS PACKED DECIMAL 10 -2
    ITEM R_WORK_TO_BE_RELEASED TYPE IS PACKED DECIMAL 8
    ITEM R_ACT_REL_QTY TYPE IS PACKEO DECIMAL 10 -2
    ITEM R_RES_OESC TYPE IS CHARACTER 16
    ITEM R_PROO_RATE_TRACKING_SIG TYPE IS CHARACTER 1
    ITEM R_RES_EFFEC TYPE IS PACKED DECIMAL 2
    ITEM R_RES_EFFIC TYPE IS PACKED OECIMAL 2
    ITEM R_RES_CAP_UTIL TYPE IS PACKED OECIMAL 2
    ITEM R_RES_SETUP_EFFIC TYPE IS PACKEO OECIMAL 2
    ITEM R_RES_TOT_SETUP_LOSS_RATE TYPE IS PACKED DECIMAL 2
```

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    ITEM R_LEV_NUM TYPE IS CHARACTER 2
    ITEM R_OVERLOADED_PD_FLAG TYPE IS CHARACTER 1

RECORD NAME IS MACHINE_TYPE
*   Within areas    : CONFIG
*   Owner of sets   : IS_REPRESENTED_BY
*                     IS_USED_AS
*   Member of sets : ALL_MACHINE_TYPE
    ITEM MT_MACH_TYPE TYPE IS CHARACTER 8
    ITEM MT_MACH_TYPE_DESC TYPE IS CHARACTER 16

RECORD NAME IS RESOURCE_MACHINE_TYPE
*   Within areas    : CONFIG
*   Owner of sets   : CONSISTS_OF_MI
*   Member of sets : ALL_RESOURCE_MACHINE_TYPE
*                     HAS
*                     IS_USED_AS
    GROUP RMT_CALC_KEY
      ITEM RMT_RES_ID TYPE IS CHARACTER 8
      ITEM RMT_MACH_TYPE TYPE IS CHARACTER 8
    ENDGROUP RMT_CALC_KEY
    ITEM RMT_Q_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_EFFECT_RATE TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_Q_TIME_VAL_LIM TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_EFFIC TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_NUM_MACHINES TYPE IS PACKED DECIMAL 3
    ITEM RMT_Q_TIME_COMP_FACTOR TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_RATIO_RUN_SETUP TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_AVG_MACH_TYPE_EFFIC TYPE IS PACKED DECIMAL 2
    ITEM RMT_AVG_SETUP_EFFECT TYPE IS PACKED DECIMAL 2
    ITEM RMT_AVG_SETUP_LOSS_RATE TYPE IS PACKED DECIMAL 2
    ITEM RMT_AVG_MACH_TYPE_EFFEC TYPE IS PACKED DECIMAL 2
    ITEM RMT_RUN_TIME_VAL_LIM TYPE IS PACKED DECIMAL 8
    ITEM RMT_SETUP_TIME_VAL_LIM TYPE IS PACKED DECIMAL 8
    ITEM RMT_RES_UTIL_VAL_LIM TYPE IS PACKED DECIMAL 8

RECORD NAME IS MACHINE_INSTANCE
*   Within areas    : CONFIG
*   Owner of sets   : IS_PROFILED_BY
*   Member of sets : MAY_EXIST_AS
*                     IS_REPRESENTED_BY
*                     CONSISTS_OF_MI
    ITEM MI_MACH_SER_NUM TYPE IS CHARACTER 8
    ITEM MI_MACH_RES_ID TYPE IS CHARACTER 8
    ITEM MI_MACH_TYPE TYPE IS CHARACTER 8

RECORD NAME IS PART
*   Within areas    : PROCPLN1
*   Owner of sets   : HAS_BEEN_ORDERED_IN
*   Member of sets : ALL_PART
    ITEM P_PART_NUM TYPE IS CHARACTER 24
    ITEM P_PART_DESC TYPE IS CHARACTER 32
    ITEM P_OVER_UNDER_QTY TYPE IS PACKED DECIMAL 8
    ITEM P_PRIME_RESP TYPE IS CHARACTER 8
    ITEM P_SCRAP_VAR_PART TYPE IS PACKED DECIMAL 8
```

```
RECORD NAME IS PRODUCTION_REQUIREMENT
*   Within areas    : FACLOAD
*   Owner of sets   : CONSISTS_OF_LU
*                     CONSOLIDATED_LU
*                     HAS_UNPROCESSED_REQUESTS
*                     CAN_BE_DESCRIBED_BY
*   Member of sets  : ALL_PRODUCTION_REQUIREMENT
*                     IS_RESPONSIBLE_FOR
*                     HAS_BEEN_ORDERED_IN
    ITEM PR_ORD_NUM TYPE IS CHARACTER 12
    ITEM PR_RES_ID TYPE IS CHARACTER 8
    ITEM PR_PART_NUM TYPE IS CHARACTER 24
    ITEM PR_ORD_QTY TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_REQUIRED_DATE TYPE IS CHARACTER 10
    ITEM PR_STATUS_CODE TYPE IS CHARACTER 8
    ITEM PR_NO_ROUTING_FLAG TYPE IS CHARACTER 1
    ITEM PR_SCHED_PROB_FLAG TYPE IS CHARACTER 1
    ITEM PR_EARL_START_DATE TYPE IS CHARACTER 10
    ITEM PR_ORD_REV_CODE TYPE IS PACKED DECIMAL 2
    ITEM PR_PRIORITY_CODE_1 TYPE IS CHARACTER 8
    ITEM PR_PRIORITY_CODE_2 TYPE IS CHARACTER 8
    ITEM PR_EXPECTED_REL_DATE TYPE IS CHARACTER 10
    ITEM PR_REVISED_ORD_QTY TYPE IS PACKED DECIMAL 8
    ITEM PR_ACT_REL_DATE TYPE IS CHARACTER 10
    ITEM PR_PLANNED_ORD_QTY TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_SPAN_TIME TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_SUM_RUN_SETUP_TIME TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_CALC_EAR_ST_DT TYPE IS CHARACTER 10

RECORD NAME IS MACH_INSTANCE_PLANNING_PERIOD
*   Within areas    : MIPPAREA
*   Owner of sets   : IS_LOADED_WITH
*   Member of sets  : ALL_MACH_INSTANCE_PLAN_PERIOD
*                     IS_PROFILED_BY
    GROUP MIPP_CALC_KEY
      ITEM MIPP_SER_NUM TYPE IS CHARACTER 8
      ITEM MIPP_PLN_PERIOD_SEQ_NO TYPE IS UNSIGNED NUMERIC 3
    ENDGROUP MIPP_CALC_KEY
    ITEM MIPP_RES_ID TYPE IS CHARACTER 8
    ITEM MIPP_MACH_TYPE TYPE IS CHARACTER 8
    ITEM MIPP_PLN_PERIOD_ID TYPE IS CHARACTER 10
    ITEM MIPP_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM MIPP_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS LOAD_UNIT
*   Within areas    : FACLOAD
*   Owner of sets   : IS_BROKEN_INTO
*   Member of sets  : CONSISTS_OF_LU
*                     CONSOLIDATED_LU
*                     IS_LOADED_WITH
    ITEM LU_ORD_NUM TYPE IS CHARACTER 12
    ITEM LU_BEGIN_OPER_NUM TYPE IS CHARACTER 4
    ITEM LU_END_OPER_NUM TYPE IS CHARACTER 4
    ITEM LU_EARL_ST_DT TYPE IS CHARACTER 10
    ITEM LU_LATE_ST_DT TYPE IS CHARACTER 10
    ITEM LU_EARL_COMPL_DT TYPE IS CHARACTER 10
    ITEM LU_REQUIRED_DATE TYPE IS CHARACTER 10
```

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      ITEM LU_PRIORITY_CODE_1 TYPE IS CHARACTER 8
      ITEM LU_PRIORITY_CODE_2 TYPE IS CHARACTER 8
      ITEM LU_SLACK_TIME TYPE IS PACKED DECIMAL 6 -2
      ITEM LU_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
      ITEM LU_QUEUE_TIME TYPE IS PACKED DECIMAL 6 -2
      ITEM LU_SETUP_TIME TYPE IS PACKED DECIMAL 6 -2
      ITEM LU_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 6 -2
      ITEM LU_COMPRES_FLAG TYPE IS CHARACTER 1
      ITEM LU_RES_ID TYPE IS CHARACTER 8
      ITEM LU_MACH_TYPE TYPE IS CHARACTER 8
      ITEM LU_STATUS TYPE IS CHARACTER 8
      ITEM LU_TOT_NUM_SEG TYPE IS PACKED DECIMAL 2
      ITEM LU_MOD_FLAG TYPE IS CHARACTER 1
      ITEM LU_PREV_RES TYPE IS CHARACTER 8
      ITEM LU_PREV_MACH_TYPE TYPE IS CHARACTER 8
      ITEM LU_SLACK_TIME_USED_TO_MOVE TYPE IS PACKED DECIMAL 6 -2
      ITEM LU_SPEC_START_DATE TYPE IS CHARACTER 10
      ITEM LU_SPEC_COMP_DATE TYPE IS CHARACTER 10
      ITEM LU_CALC_ST_DT TYPE IS CHARACTER 10
      ITEM LU_SEQUENCE_NUM TYPE IS UNSIGNED NUMERIC 4
      ITEM LU_ALT_OPER_FLAG TYPE IS CHARACTER 1
      ITEM LU_ALT_OPER_NUM TYPE IS CHARACTER 4
      ITEM LU_COMP_Q_TIME TYPE IS PACKED DECIMAL 6 -2
      ITEM LU_COMP_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
      ITEM LU_OPER_SPAN_TIME TYPE IS PACKED DECIMAL 6 -2
      ITEM LU_CHECK_COUNTER TYPE IS PACKED DECIMAL 8
      ITEM LU_PARALLEL_PROC TYPE IS CHARACTER 1
      ITEM LU_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
      ITEM LU_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
      ITEM LU_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS LOAD_UNIT_SEGMENT
*     Within areas    : FACLOAD
*     Member of sets  : IS_LOADED_WITH
*                       IS_BROKEN_INTO
      ITEM LUS_ORD_NUM TYPE IS CHARACTER 12
      ITEM LUS_BEGIN_OPER_NUM TYPE IS CHARACTER 4
      ITEM LUS_END_OPER_NUM TYPE IS CHARACTER 4
      ITEM LUS_MULTI_PERIOD_FLAG TYPE IS CHARACTER 1
      ITEM LUS_SEG_NUM TYPE IS PACKED DECIMAL 2
      ITEM LUS_PARAL_PROC_FLAG TYPE IS CHARACTER 1
      ITEM LUS_MULTI_PARAL_PROC_FLAG TYPE IS CHARACTER 1
      ITEM LUS_LOAD_HRS TYPE IS PACKED DECIMAL 6 -2

RECORD NAME IS TRANSACTION
*     Within areas    : CONFIG
*     Owner of sets   : IS_MADE_UP_OF
*                       IS_A
*                       IS_EXECUTED_AFTER
*     Member of sets  : ALL_TRANSACTION
      ITEM T_TRAN_ID TYPE IS CHARACTER 6
      ITEM T_BUSY_FLAG TYPE IS CHARACTER 1
      ITEM T_TRAN_DESC TYPE IS CHARACTER 40
      ITEM T_USER_ID TYPE IS CHARACTER 12
      ITEM T_START_DATE TYPE IS CHARACTER 10
      ITEM T_START_TIME TYPE IS CHARACTER 8
      ITEM T_END_DATE TYPE IS CHARACTER 10
```

```
    ITEM T_END_TIME TYPE IS CHARACTER 8
    ITEM T_INFO_BLOCK TYPE IS CHARACTER 250

RECORD NAME IS PRIOR_TRANSACTION
*   Within areas    : CONFIG
*   Member of sets  : IS_A
*                     IS_EXECUTED_AFTER
    ITEM PT_TRAN_ID TYPE IS CHARACTER 6
    ITEM PT_MISC_INFO TYPE IS CHARACTER 30

RECORD NAME IS ACTIVITY
*   Within areas    : CONFIG
*   Owner of sets   : MAY_BE_PERFORMED_AS
*   Member of sets  : IS_MADE_UP_OF
    ITEM A_ACTIVITY_ID TYPE IS CHARACTER 6
    ITEM A_STATUS TYPE IS CHARACTER 1
    ITEM A_DESC TYPE IS CHARACTER 40
    ITEM A_MISC_INFO TYPE IS CHARACTER 40
    ITEM A_NUM_SUBPROC TYPE IS PACKED DECIMAL 3

RECORD NAME IS SUBPROCESS_ACTIVITY
*   Within areas    : CONFIG
*   Member of sets : MAY_BE_PERFORMED_AS
    ITEM SA_SUBPROCESS_ID TYPE IS UNSIGNED NUMERIC 3
    ITEM SA_ACTIVITY_ID TYPE IS CHARACTER 6
    ITEM SA_STATUS TYPE IS CHARACTER 1
    ITEM SA_DESC TYPE IS CHARACTER 40
    ITEM SA_MISC_INFO TYPE IS CHARACTER 60

RECORD NAME IS PLANNING_PERIOD
*   Within areas    : CONFIG
*   Owner of sets   : MAY_BE_SPECIFIED_BY
*   Member of sets : ALL_PLANNING_PERIOD
    ITEM PP_PERIOD_ID TYPE IS CHARACTER 10
    ITEM PP_GREG_DATE TYPE IS CHARACTER 10
    ITEM PP_FISCAL_YR TYPE IS CHARACTER 10
    ITEM PP_FISCAL_QTR TYPE IS CHARACTER 10
    ITEM PP_FISCAL_MO TYPE IS CHARACTER 10
    ITEM PP_FISCAL_WK TYPE IS CHARACTER 10
    ITEM PP_MDAY_NUM TYPE IS CHARACTER 6
    ITEM PP_GREG_ST_DT TYPE IS CHARACTER 10
    ITEM PP_GREG_END_DT TYPE IS CHARACTER 10
    ITEM PP_SHUT_DOWN_FLAG TYPE IS CHARACTER 1

RECORD NAME IS M_DAY
*   Within areas    : CONFIG
*   Member of sets  : MAY_BE_SPECIFIED_BY
    ITEM MD_MDAY_NUM TYPE IS CHARACTER 6
    ITEM MD_GREG_DATE TYPE IS CHARACTER 10
    ITEM MD_FISCAL_YR TYPE IS CHARACTER 10
    ITEM MD_FISCAL_QTR TYPE IS CHARACTER 10
    ITEM MD_FISCAL_MO TYPE IS CHARACTER 10
    ITEM MD_FISCAL_WK TYPE IS CHARACTER 10
```

```
RECORD NAME IS GLOBAL_PARAMETER
*   Within areas    : CONFIG
*   Member of sets : ALL_GLOBAL_PARAMETER
    ITEM GP_ID TYPE IS CHARACTER 4
    ITEM GP_M_DAY_UPLIM TYPE IS CHARACTER 4
    ITEM GP_FW_BEGIN_DAY TYPE IS CHARACTER 1
    ITEM GP_PREV_FY_END TYPE IS CHARACTER 2
    GROUP GP_MONTH_ARRAY
      ITEM GP_FWMONTHS TYPE IS CHARACTER 1 OCCURS 12 TIMES
    ENDGROUP GP_MONTH_ARRAY
    ITEM GP_SUM_FW_BRKDWN TYPE IS CHARACTER 2
    ITEM GP_MAX_PART_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_MOVE_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_RMT_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_RD_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_EARLIEST_START_DT_ALL TYPE IS CHARACTER 10
    ITEM GP_LATEST_REQUIRED_DATE_ALL TYPE IS CHARACTER 10
    ITEM GP_MISSING_ROUTING_COUNT TYPE IS PACKED DECIMAL 4
    ITEM GP_MISSING_ROUTING_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_MISSING_MOVE_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_MISSING_QUEUE_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_SCHEDULE_PROB_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_PART_LEAD_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_MOVE_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_Q_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_PRI_METHOD_1 TYPE IS UNSIGNED NUMERIC 1
    ITEM GP_PRI_METHOD_2 TYPE IS UNSIGNED NUMERIC 1

RECORD NAME IS PR_CHANGE_REQUEST
*   Within areas    : FACLDAD
*   Member of sets : HAS_UNPROCESSED_REQUESTS
    ITEM PRCR_CHANGE_ID TYPE IS PACKED DECIMAL 3
    ITEM PRCR_EARL_START_DATE TYPE IS CHARACTER 10
    ITEM PRCR_REQUIRED_DATE TYPE IS CHARACTER 10
    ITEM PRCR_ORD_QTY TYPE IS PACKED DECIMAL 8 -2
    ITEM PRCR_CANCEL_FLAG TYPE IS CHARACTER 1

RECORD NAME IS PR_STATE
*   Within areas    : CONFIG
*   Owner of sets   : INCLUDES_PR
*   Member of sets : ALL_PR_STATE
    ITEM PRS_PRSTATE_ID TYPE IS CHARACTER 4
    ITEM PRS_PRSTATE_DESC TYPE IS CHARACTER 24

RECORD NAME IS PR_STATE_RELATION
*   Within areas    : CONFIG
*   Member of sets : CAN_BE_DESCRIBED_BY
*                    INCLUDES_PR
    ITEM PRSR_PRFIELD TYPE IS CHARACTER 4

SET NAME IS ALL_LEVEL
*   Owner is SYSTEM
*   Member is LEVEL
*       Insertion is AUTOMATIC retention is FIXED
```

```
SET NAME IS ALL_RESOURCE
*   Owner is SYSTEM
*   Member is RESOURCE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_MACHINE_TYPE
*   Owner is SYSTEM
*   Member is MACHINE_TYPE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_PART
*   Owner is SYSTEM
*   Member is PART
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_PRODUCTION_REQUIREMENT
*   Owner is SYSTEM
*   Member is PRODUCTION_REQUIREMENT
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_RESOURCE_MACHINE_TYPE
*   Owner is SYSTEM
*   Member is RESOURCE_MACHINE_TYPE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_MACH_INSTANCE_PLAN_PERIOD
*   Owner is SYSTEM
*   Member is MACH_INSTANCE_PLANNING_PERIOD
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_PLANNING_PERIOD
*   Owner is SYSTEM
*   Member is PLANNING_PERIOD
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_TRANSACTION
*   Owner is SYSTEM
*   Member is TRANSACTION
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_GLOBAL_PARAMETER
*   Owner is SYSTEM
*   Member is GLOBAL_PARAMETER
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_PR_STATE
*   Owner is SYSTEM
*   Member is PR_STATE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS CONTAINS_R
*   Owner is LEVEL
*   Member is RESOURCE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST
```

```
SET NAME IS SEL_FOR_RELEASE
*    Owner is LEVEL
*    Member is RESOURCE
*         Insertion is MANUAL retention is OPTIONAL
*        Order is LAST

SET NAME IS MAY_EXIST_AS
*    Owner is RESOURCE
*    Member is MACHINE_INSTANCE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS HAS
*    Owner is RESOURCE
*    Member is RESOURCE_MACHINE_TYPE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS IS_RESPONSIBLE_FOR
*    Owner is RESOURCE
*    Member is PROOUCTION_REQUIREMENT
*         Insertion is MANUAL retention is OPTIONAL
*        Order is LAST

SET NAME IS IS_REPRESENTEO_BY
*    Owner is MACHINE_TYPE
*    Member is MACHINE_INSTANCE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS IS_USED_AS
*    Owner is MACHINE_TYPE
*    Member is RESOURCE_MACHINE_TYPE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS CONSISTS_OF_MI
*    Owner is RESOURCE_MACHINE_TYPE
*    Member is MACHINE_INSTANCE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS IS_PROFILEO_BY
*    Owner is MACHINE_INSTANCE
*    Member is MACH_INSTANCE_PLANNING_PERIOO
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is NEXT

SET NAME IS HAS_BEEN_OROEREO_IN
*    Owner is PART
*    Member is PROOUCTION_REQUIREMENT
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST
```

```
SET NAME IS CONSISTS_OF_LU
*   Owner is PROOUCTION_REQUIREMENT
*   Member is LOAD_UNIT
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is NEXT

SET NAME IS CONSOLIOATED_LU
*   Owner is PROOUCTION_REQUIREMENT
*   Member is LOAO_UNIT
*        Insertion is MANUAL retention is OPTIONAL
*       Order is NEXT

SET NAME IS HAS_UNPROCESSED_REQUESTS
*   Owner is PRODUCTION_REQUIREMENT
*   Member is PR_CHANGE_REQUEST
*        Insertion is AUTOMATIC retention is FIXEO
*       Order is LAST

SET NAME IS CAN_BE_DESCRIBEO_BY
*   Owner is PROOUCTION_REQUIREMENT
*   Member is PR_STATE_RELATION
*        Insertion is AUTOMATIC retention is FIXED
*       Order is LAST

SET NAME IS IS_LOADED_WITH
*   Owner is MACH_INSTANCE_PLANNING_PERIOO
*   Member is LOAO_UNIT
*        Insertion is MANUAL retention is OPTIONAL
*       Order is NEXT
*   Member is LOAD_UNIT_SEGMENT
*        Insertion is MANUAL retention is OPTIONAL
*       Order is NEXT

SET NAME IS IS_BROKEN_INTO
*   Owner is LOAO_UNIT
*   Member is LOAD_UNIT_SEGMENT
*        Insertion is AUTOMATIC retention is FIXED
*       Order is NEXT

SET NAME IS MAY_BE_SPECIFIEO_BY
*   Owner is PLANNING_PERIOD
*   Member is M_DAY
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS INCLUDES_PR
*   Owner is PR_STATE
*   Member is PR_STATE_RELATION
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_MAOE_UP_OF
*   Owner is TRANSACTION
*   Member is ACTIVITY
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is NEXT
```

```
SET NAME IS IS_A
*    Owner is TRANSACTION
*    Member is PRIOR_TRANSACTION
*         Insertion is AUTOMATIC retention is OPTIONAL
*         Order is LAST

SET NAME IS IS_EXECUTED_AFTER
*    Owner is TRANSACTION
*    Member is PRIOR_TRANSACTION
*         Insertion is AUTOMATIC retention is OPTIONAL
*         Order is LAST

SET NAME IS MAY_BE_PERFORMED_AS
*    Owner is ACTIVITY
*    Member is SUBPROCESS_ACTIVITY
*         Insertion is AUTOMATIC retention is OPTIONAL
*         Order is LAST
```

APPENDIX I

PP&CS DATA-BASE SUBSCHEMA TOTSUBLT LISTING

```
*****************************************************************
*                                                               *
*  THIS IS A LISTING FOR SUBSCHEMA TOTSUB_LT                    *
*                                                               *
*****************************************************************

SUBSCHEMA NAME IS TOTSUB_LT FOR TOTPPCS SCHEMA
*    Subschema version number : 12-OEC-1983 09:32:18.02
*    Schema version number :  9-DEC-1983 19:23:07.72 (1)

REALM PROCPLN1
     IS PROCPLN1
REALM PROCPLN2
     IS PROCPLN2
REALM FACLOAD
     IS FACLOAD
REALM CONFIG
     IS CONFIG
REALM MIPPAREA
     IS MIPPAREA
REALM LTFLOAD
     IS LTFLOAD
REALM LTTEMP
     IS LTTEMP

RECORD NAME IS LEVEL
*    Within areas    : CONFIG
*    Owner of sets   : CONTAINS_R
*                      SEL_FOR_RELEASE
*    Member of sets  : ALL_LEVEL
     ITEM L_LEV_NUM TYPE IS CHARACTER 2
     ITEM L_LEV_ID TYPE IS CHARACTER 8
     ITEM L_LEV_DPT_CD TYPE IS CHARACTER 8
     ITEM L_LEV_DESC TYPE IS CHARACTER 24

RECORD NAME IS RESOURCE
*    Within areas    : CONFIG
*    Owner of sets   : MAY_EXIST_AS
*                      HAS
*                      IS_RESPONSIBLE_FOR
*                      RELEASE_BY_DATE
*                      IS_ASSIGNED
*                      HAS_SHORT_TERM_LOAD
*                      HAS_PSUEDO_RELEASE
*                      CONTAINS_RELEASE
*                      CONTAINS_LLR
*                      IS_ALSO
*                      HAS_LT_RES_PROFILE
*    Member of sets  : ALL_RESOURCE
*                      CONTAINS_R
*                      SEL_FOR_RELEASE
     ITEM R_RES_ID TYPE IS CHARACTER 8
     ITEM R_LEV_ID TYPE IS CHARACTER 8
     ITEM R_LEV_DPT_CD TYPE IS CHARACTER 8
     ITEM R_REL_LOAD_LOWER_LIM TYPE IS PACKED DECIMAL 8
     ITEM R_REL_LOAD TYPE IS PACKED DECIMAL 10 -2
     ITEM R_REL_LOAD_UP_LIM TYPE IS PACKED DECIMAL 8
     ITEM R_INWORK_DATE_REL_INT TYPE IS PACKED DECIMAL 8
```

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    ITEM R_AUTO_REL_IND TYPE IS CHARACTER 1
    ITEM R_TOT_ACCUM_WORK TYPE IS PACKED DECIMAL 10 -2
    ITEM R_RES_LOAD_UNIT_HDURS TYPE IS PACKED DECIMAL 10 -2
    ITEM R_DISP_LOAD TYPE IS PACKED DECIMAL 10 -2
    ITEM R_CURRENT_LOAD TYPE IS PACKED DECIMAL 10 -2
    ITEM R_WORK_TO_BE_RELEASED TYPE IS PACKED DECIMAL 8
    ITEM R_ACT_REL_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM R_RES_DESC TYPE IS CHARACTER 16
    ITEM R_PROD_RATE_TRACKING_SIG TYPE IS CHARACTER 1
    ITEM R_RES_EFFEC TYPE IS PACKED DECIMAL 2
    ITEM R_RES_EFFIC TYPE IS PACKED DECIMAL 2
    ITEM R_RES_CAP_UTIL TYPE IS PACKED DECIMAL 2
    ITEM R_RES_SETUP_EFFIC TYPE IS PACKED DECIMAL 2
    ITEM R_RES_TOT_SETUP_LDSS_RATE TYPE IS PACKED DECIMAL 2
    ITEM R_LEV_NUM TYPE IS CHARACTER 2
    ITEM R_OVERLOADED_PD_FLAG TYPE IS CHARACTER 1

RECORD NAME IS LOWER_LEVEL_RESOURCE
*   Within areas    : CONFIG
*   Member of sets : CONTAINS_LLR
*                     IS_ALSD
    ITEM LLR_RES_ID TYPE IS CHARACTER 8
    ITEM LLR_LL_RES_ID TYPE IS CHARACTER 8

RECORD NAME IS RESOURCE_PLANNING_PERIOD
*   Within areas    : CONFIG
*   Member of sets : ALL_RESOURCE_PLANNING_PERIDD
*                     HAS_LT_RES_PROFILE
    GROUP RPP_CALC_KEY
      ITEM RPP_RESOURCE_ID TYPE IS CHARACTER 8
      ITEM RPP_PLN_PERIOD_ID TYPE IS CHARACTER 10
    ENDGROUP RPP_CALC_KEY
    ITEM RPP_TOTAL_CAPACITY_HRS TYPE IS PACKED DECIMAL 8 -2
    ITEM RPP_TOTAL_LOAD_HRS TYPE IS PACKED DECIMAL 8 -2
    ITEM RPP_CUM_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM RPP_CUM_LDAD_HRS TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS MACHINE_TYPE
*   Within areas    : CONFIG
*   Dwner of sets   : IS_REPRESENTED_BY
*                     IS_USED_AS
*   Member of sets : ALL_MACHINE_TYPE
    ITEM MT_MACH_TYPE TYPE IS CHARACTER 8
    ITEM MT_MACH_TYPE_DESC TYPE IS CHARACTER 16

RECORD NAME IS RESOURCE_MACHINE_TYPE
*   Within areas    : CONFIG
*   Owner of sets   : CONSISTS_OF_MI
*                     HAS_PROBS_LOADING
*                     HAS_CI
*                     HAS_RMTH
*   Member of sets : ALL_RESDURCE_MACHINE_TYPE
*                     HAS
*                     IS_USED_AS
    GRDUP RMT_CALC_KEY
      ITEM RMT_RES_ID TYPE IS CHARACTER 8
      ITEM RMT_MACH_TYPE TYPE IS CHARACTER 8
```

```
    ENDGROUP RMT_CALC_KEY
    ITEM RMT_Q_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_EFFECT_RATE TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_Q_TIME_VAL_LIM TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_EFFIC TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_NUM_MACHINES TYPE IS PACKED DECIMAL 3
    ITEM RMT_Q_TIME_COMP_FACTOR TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_RATIO_RUN_SETUP TYPE IS PACKED DECIMAL 6 -2
    ITEM RMT_AVG_MACH_TYPE_EFFIC TYPE IS PACKED DECIMAL 2
    ITEM RMT_AVG_SETUP_EFFECT TYPE IS PACKED DECIMAL 2
    ITEM RMT_AVG_SETUP_LOSS_RATE TYPE IS PACKED DECIMAL 2
    ITEM RMT_AVG_MACH_TYPE_EFFEC TYPE IS PACKED DECIMAL 2
    ITEM RMT_RUN_TIME_VAL_LIM TYPE IS PACKED DECIMAL 8
    ITEM RMT_SETUP_TIME_VAL_LIM TYPE IS PACKED DECIMAL 8
    ITEM RMT_RES_UTIL_VAL_LIM TYPE IS PACKED DECIMAL 8

RECORD NAME IS MACHINE_INSTANCE
*   Within areas    : CONFIG
*   Owner of sets   : IS_PROFILED_BY
*                     ALSO_HAS_CI
*   Member of sets : MAY_EXIST_AS
*                     IS_REPRESENTED_BY
*                     CONSISTS_OF_MI
    ITEM MI_MACH_SER_NUM TYPE IS CHARACTER 8
    ITEM MI_MACH_RES_ID TYPE IS CHARACTER 8
    ITEM MI_MACH_TYPE TYPE IS CHARACTER 8

RECORD NAME IS PART
*   Within areas    : PROCPLN1
*   Owner of sets   : HAS_ROUTING
*                     HAS_BEEN_ORDERED_IN
*                     HAS_PART_HISTORY
*   Member of sets : ALL_PART
    ITEM P_PART_NUM TYPE IS CHARACTER 24
    ITEM P_PART_DESC TYPE IS CHARACTER 32
    ITEM P_OVER_UNDER_QTY TYPE IS PACKED DECIMAL 8
    ITEM P_PRIME_RESP TYPE IS CHARACTER 8
    ITEM P_SCRAP_VAR_PART TYPE IS PACKED DECIMAL 8

RECORD NAME IS PLANNED_ROUTING
*   Within areas    : PROCPLN1
*   Owner of sets   : IS_COMPOSED_OF
*   Member of sets : HAS_ROUTING
    ITEM PL_ROUTING_NUM TYPE IS UNSIGNED NUMERIC 2
    ITEM PL_EFFECTIVITY_DATE TYPE IS CHARACTER 10
    ITEM PL_REVISION_DATE TYPE IS CHARACTER 10
    ITEM PL_REVISION_NUM TYPE IS UNSIGNED NUMERIC 4
    ITEM PL_RAW_MATL_ITEM_ID TYPE IS CHARACTER 24
    ITEM PL_RAW_MATL_DESC TYPE IS CHARACTER 32
    ITEM PL_RAW_MATL_QTY_PER TYPE IS UNSIGNED NUMERIC 2
    ITEM PL_RESP_DEPT TYPE IS CHARACTER 8
    ITEM PL_ORIGIN_LOCATION TYPE IS CHARACTER 8
```

```
RECORO NAME IS ROUTING_OPERATION
*   Within areas    : PROCPLN2
*   Owner of sets   : MAY_BE_REPLACEO_BY
*                     HAS_LU
*                     HAS_ROH
*   Member of sets : IS_COMPOSED_OF
     ITEM RO_OPER_NUM TYPE IS UNSIGNED NUMERIC 4
     ITEM RO_OPER_OESC TYPE IS CHARACTER 15
     ITEM RO_DEPT TYPE IS CHARACTER 8
     ITEM RO_MACH_TYPE TYPE IS CHARACTER 8
     ITEM RO_STO_SETUP_HOURS TYPE IS PACKED DECIMAL 8 -3
     ITEM RO_STD_HOURS_PER_OPER TYPE IS PACKED DECIMAL 8 -3
     ITEM RO_PER_COOE TYPE IS UNSIGNED NUMERIC 1
     ITEM RO_REQED_TOOL_KIT_ID TYPE IS CHARACTER 8
     ITEM RO_NUM_TOOL_KITS_AVAIL TYPE IS UNSIGNED NUMERIC 2
     ITEM RO_SKILL_REOMT TYPE IS CHARACTER 8
     ITEM RO_SKILL_OESC TYPE IS CHARACTER 15
     ITEM RO_NUM_SKILLED_EMP_NEEDEO TYPE IS UNSIGNED NUMERIC 2
     ITEM RO_PROCESS_SPEC TYPE IS CHARACTER 80 OCCURS 4 TIMES

RECORO NAME IS ALTERNATE_OPERATION
*   Within areas    : PROCPLN2
*   Owner of sets   : MAY_ALSO_REOUIRE
*   Member of sets : MAY_BE_REPLACED_BY
     ITEM AO_ALT_OPER_NUM TYPE IS CHARACTER 4
     ITEM AO_OPER_DESC TYPE IS CHARACTER 15
     ITEM AO_DEPT TYPE IS CHARACTER 8
     ITEM AO_MACH_TYPE TYPE IS CHARACTER 8
     ITEM AO_STO_SETUP_HOURS TYPE IS PACKEO DECIMAL 8 -3
     ITEM AO_STD_HOURS_PER_OPER TYPE IS PACKED DECIMAL 8 -3
     ITEM AO_PER_CODE TYPE IS UNSIGNED NUMERIC 1
     ITEM AO_REOED_TOOL_KIT_ID TYPE IS CHARACTER 8
     ITEM AO_NUM_TOOL_KITS_AVAIL TYPE IS UNSIGNEO NUMERIC 2
     ITEM AO_SKILL_REQMT TYPE IS CHARACTER 8
     ITEM AO_SKILL_OESC TYPE IS CHARACTER 15
     ITEM AO_NUM_SKILLED_EMP_NEEDED TYPE IS UNSIGNED NUMERIC 2
     ITEM AO_PROCESS_SPEC TYPE IS CHARACTER 80 OCCURS 4 TIMES

RECORD NAME IS CONTINGENCY_OPERATION
*   Within areas    : PROCPLN2
*   Member of sets : MAY_ALSO_REOUIRE
     ITEM CO_CONT_OPER_NUM TYPE IS CHARACTER 4
     ITEM CO_OPER_DESC TYPE IS CHARACTER 15
     ITEM CO_DEPT TYPE IS CHARACTER 8
     ITEM CO_MACH_TYPE TYPE IS CHARACTER 8
     ITEM CO_STO_SETUP_HOURS TYPE IS PACKED DECIMAL 8 -3
     ITEM CO_STD_HOURS_PER_OPER TYPE IS PACKED DECIMAL 8 -3
     ITEM CO_PER_CODE TYPE IS UNSIGNEO NUMERIC 1
     ITEM CO_REOED_TOOL_KIT_ID TYPE IS CHARACTER 8
     ITEM CO_NUM_TOOL_KITS_AVAIL TYPE IS UNSIGNEO NUMERIC 2
     ITEM CO_SKILL_REQMT TYPE IS CHARACTER 8
     ITEM CO_SKILL_DESC TYPE IS CHARACTER 15
     ITEM CO_NUM_SKILLED_EMP_NEEDED TYPE IS UNSIGNED NUMERIC 2
     ITEM CO_PROCESS_SPEC TYPE IS CHARACTER 80 OCCURS 4 TIMES
```

```
RECORD NAME IS PRODUCTION_REQUIREMENT
*   Within areas    : FACLOAD
*   Owner of sets   : CONSISTS_OF_LU
*                     CONSOLIDATED_LU
*                     HAS_UNPROCESSED_REQUESTS
*                     CAN_BE_DESCRIBED_BY
*   Member of sets  : ALL_PRODUCTION_REQUIREMENT
*                     IS_RESPONSIBLE_FOR
*                     RELEASE_BY_DATE
*                     IS_ASSIGNED
*                     HAS_SHORT_TERM_LOAD
*                     HAS_PSUEDO_RELEASE
*                     CONTAINS_RELEASE
*                     HAS_BEEN_ORDERED_IN
    ITEM PR_ORD_NUM TYPE IS CHARACTER 12
    ITEM PR_PART_NUM TYPE IS CHARACTER 24
    ITEM PR_RES_ID TYPE IS CHARACTER 8
    ITEM PR_ORD_QTY TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_REQUIRED_DATE TYPE IS CHARACTER 10
    ITEM PR_STATUS_CODE TYPE IS CHARACTER 8
    ITEM PR_NO_ROUTING_FLAG TYPE IS CHARACTER 1
    ITEM PR_SCHED_PROB_FLAG TYPE IS CHARACTER 1
    ITEM PR_EARL_START_DATE TYPE IS CHARACTER 10
    ITEM PR_ORD_REV_CODE TYPE IS PACKED DECIMAL 2
    ITEM PR_PRIORITY_CODE_1 TYPE IS CHARACTER 8
    ITEM PR_PRIORITY_CODE_2 TYPE IS CHARACTER 8
    ITEM PR_EXPECTED_REL_DATE TYPE IS CHARACTER 10
    ITEM PR_REVISED_ORD_QTY TYPE IS PACKED DECIMAL 8
    ITEM PR_ACT_REL_DATE TYPE IS CHARACTER 10
    ITEM PR_PLANNED_ORD_QTY TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_SPAN_TIME TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_SUM_RUN_SETUP_TIME TYPE IS PACKED DECIMAL 8 -2
    ITEM PR_CALC_EAR_ST_DT TYPE IS CHARACTER 10

RECORD NAME IS MACH_INSTANCE_PLANNING_PERIOD
*   Within areas    : MIPPAREA
*   Owner of sets   : IS_LOADED_WITH
*   Member of sets  : ALL_MACH_INSTANCE_PLAN_PERIOD
*                     IS_PROFILED_BY
    GROUP MIPP_CALC_KEY
      ITEM MIPP_SER_NUM TYPE IS CHARACTER 8
      ITEM MIPP_PLN_PERIOD_SEQ_NO TYPE IS UNSIGNED NUMERIC 3
    ENDGROUP MIPP_CALC_KEY
    ITEM MIPP_RES_ID TYPE IS CHARACTER 8
    ITEM MIPP_MACH_TYPE TYPE IS CHARACTER 8
    ITEM MIPP_PLN_PERIOD_ID TYPE IS CHARACTER 10
    ITEM MIPP_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM MIPP_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2
```

```
RECORD NAME IS LOAD_UNIT
*   Within areas    : FACLOAD
*   Owner of sets   : IS_BROKEN_INTO
*                     HAS_LOAP
*                     IS_CHARACTERIZED_BY
*   Member of sets  : HAS_PROBS_LOADING
*                     HAS_LU
*                     CONSISTS_OF_LU
*                     CONSOLIDATED_LU
*                     IS_LOADED_WITH
     ITEM LU_ORD_NUM TYPE IS CHARACTER 12
     ITEM LU_BEGIN_OPER_NUM TYPE IS CHARACTER 4
     ITEM LU_END_OPER_NUM TYPE IS CHARACTER 4
     ITEM LU_EARL_ST_DT TYPE IS CHARACTER 10
     ITEM LU_LATE_ST_DT TYPE IS CHARACTER 10
     ITEM LU_EARL_COMPL_DT TYPE IS CHARACTER 10
     ITEM LU_REQUIRED_DATE TYPE IS CHARACTER 10
     ITEM LU_PRIORITY_CODE_1 TYPE IS CHARACTER 8
     ITEM LU_PRIORITY_CODE_2 TYPE IS CHARACTER 8
     ITEM LU_SLACK_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_QUEUE_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_SETUP_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_COMPRES_FLAG TYPE IS CHARACTER 1
     ITEM LU_RES_ID TYPE IS CHARACTER 8
     ITEM LU_MACH_TYPE TYPE IS CHARACTER 8
     ITEM LU_STATUS TYPE IS CHARACTER 8
     ITEM LU_TOT_NUM_SEG TYPE IS PACKED DECIMAL 2
     ITEM LU_MOD_FLAG TYPE IS CHARACTER 1
     ITEM LU_PREV_RES TYPE IS CHARACTER 8
     ITEM LU_PREV_MACH_TYPE TYPE IS CHARACTER 8
     ITEM LU_SLACK_TIME_USED_TO_MOVE TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_SPEC_START_DATE TYPE IS CHARACTER 10
     ITEM LU_SPEC_COMP_DATE TYPE IS CHARACTER 10
     ITEM LU_CALC_ST_DT TYPE IS CHARACTER 10
     ITEM LU_SEQUENCE_NUM TYPE IS UNSIGNED NUMERIC 4
     ITEM LU_ALT_OPER_FLAG TYPE IS CHARACTER 1
     ITEM LU_ALT_OPER_NUM TYPE IS CHARACTER 4
     ITEM LU_COMP_Q_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_COMP_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_OPER_SPAN_TIME TYPE IS PACKED DECIMAL 6 -2
     ITEM LU_CHECK_COUNTER TYPE IS PACKED DECIMAL 8
     ITEM LU_PARALLEL_PROC TYPE IS CHARACTER 1
     ITEM LU_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
     ITEM LU_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
     ITEM LU_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
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RECORD NAME IS LOAO_UNIT_SEGMENT
*    Within areas    : FACLOAO
*    Member of sets  : IS_LOADED_WITH
*                      IS_BROKEN_INTO
     ITEM LUS_ORD_NUM TYPE IS CHARACTER 12
     ITEM LUS_BEGIN_OPER_NUM TYPE IS CHARACTER 4
     ITEM LUS_END_OPER_NUM TYPE IS CHARACTER 4
     ITEM LUS_MULTI_PERIOD_FLAG TYPE IS CHARACTER 1
     ITEM LUS_SEG_NUM TYPE IS PACKED DECIMAL 2
     ITEM LUS_PARAL_PROC_FLAG TYPE IS CHARACTER 1
     ITEM LUS_MULTI_PARAL_PROC_FLAG TYPE IS CHARACTER 1
     ITEM LUS_LOAO_HRS TYPE IS PACKED DECIMAL 6 -2

RECORO NAME IS TRANSACTION
*    Within areas    : CONFIG
*    Owner of sets   : IS_MADE_UP_OF
*                      IS_A
*                      IS_EXECUTED_AFTER
*    Member of sets  : ALL_TRANSACTION
     ITEM T_TRAN_IO TYPE IS CHARACTER 6
     ITEM T_BUSY_FLAG TYPE IS CHARACTER 1
     ITEM T_TRAN_DESC TYPE IS CHARACTER 40
     ITEM T_USER_ID TYPE IS CHARACTER 12
     ITEM T_START_DATE TYPE IS CHARACTER 10
     ITEM T_START_TIME TYPE IS CHARACTER 8
     ITEM T_END_DATE TYPE IS CHARACTER 10
     ITEM T_END_TIME TYPE IS CHARACTER 8
     ITEM T_INFO_BLOCK TYPE IS CHARACTER 250

RECORD NAME IS PRIOR_TRANSACTION
*    Within areas    : CONFIG
*    Member of sets  : IS_A
*                      IS_EXECUTED_AFTER
     ITEM PT_TRAN_ID TYPE IS CHARACTER 6
     ITEM PT_MISC_INFO TYPE IS CHARACTER 30

RECORO NAME IS ACTIVITY
*    Within areas    : CONFIG
*    Owner of sets   : MAY_BE_PERFORMED_AS
*    Member of sets  : IS_MADE_UP_OF
     ITEM A_ACTIVITY_ID TYPE IS CHARACTER 6
     ITEM A_STATUS TYPE IS CHARACTER 1
     ITEM A_DESC TYPE IS CHARACTER 40
     ITEM A_MISC_INFO TYPE IS CHARACTER 40
     ITEM A_NUM_SUBPROC TYPE IS PACKED DECIMAL 3

RECORD NAME IS SUBPROCESS_ACTIVITY
*    Within areas    : CONFIG
*    Member of sets : MAY_BE_PERFORMED_AS
     ITEM SA_SUBPROCESS_ID TYPE IS PACKED DECIMAL 3
     ITEM SA_ACTIVITY_ID TYPE IS CHARACTER 6
     ITEM SA_STATUS TYPE IS CHARACTER 1
     ITEM SA_DESC TYPE IS CHARACTER 40
     ITEM SA_MISC_INFO TYPE IS CHARACTER 60
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RECORD NAME IS MOVE_TIME
*   Within areas    : FACLOAD
*   Owner of sets   : HAS_MOVE_HISTORY
*   Member of sets : ALL_MOVE_TIME
    GROUP MV_CALC_KEY
      ITEM MV_START_RES_ID TYPE IS CHARACTER 8
      ITEM MV_START_MACH_TYPE_ID TYPE IS CHARACTER 8
      ITEM MV_END_RES_ID TYPE IS CHARACTER 8
      ITEM MV_END_MACH_TYPE_ID TYPE IS CHARACTER 8
    ENDGROUP MV_CALC_KEY
    ITEM MV_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM MV_MOVE_TIME_COMP_FACTOR TYPE IS PACKED DECIMAL 6 -2
    ITEM MV_MOVE_TIME_VAL_LIM TYPE IS PACKED DECIMAL 6 -2

RECORD NAME IS PLANNING_PERIOD
*   Within areas    : CONFIG
*   Owner of sets   : MAY_BE_SPECIFIED_BY
*   Member of sets : ALL_PLANNING_PERIOD
    ITEM PP_PERIOD_ID TYPE IS CHARACTER 10
    ITEM PP_GREG_DATE TYPE IS CHARACTER 10
    ITEM PP_FISCAL_YR TYPE IS CHARACTER 10
    ITEM PP_FISCAL_QTR TYPE IS CHARACTER 10
    ITEM PP_FISCAL_MO TYPE IS CHARACTER 10
    ITEM PP_FISCAL_WK TYPE IS CHARACTER 10
    ITEM PP_MDAY_NUM TYPE IS CHARACTER 6
    ITEM PP_GREG_ST_DT TYPE IS CHARACTER 10
    ITEM PP_GREG_END_DT TYPE IS CHARACTER 10
    ITEM PP_SHUT_DOWN_FLAG TYPE IS CHARACTER 1

RECORD NAME IS M_DAY
*   Within areas    : CONFIG
*   Member of sets : MAY_BE_SPECIFIED_BY
    ITEM MD_MDAY_NUM TYPE IS CHARACTER 6
    ITEM MD_GREG_DATE TYPE IS CHARACTER 10
    ITEM MD_FISCAL_YR TYPE IS CHARACTER 10
    ITEM MD_FISCAL_QTR TYPE IS CHARACTER 10
    ITEM MD_FISCAL_MO TYPE IS CHARACTER 10
    ITEM MD_FISCAL_WK TYPE IS CHARACTER 10

RECORD NAME IS GLOBAL_PARAMETER
*   Within areas    : CONFIG
*   Member of sets : ALL_GLOBAL_PARAMETER
    ITEM GP_ID TYPE IS CHARACTER 4
    ITEM GP_M_DAY_UPLIM TYPE IS CHARACTER 4
    ITEM GP_FW_BEGIN_DAY TYPE IS CHARACTER 1
    ITEM GP_PREV_FY_END TYPE IS CHARACTER 2
    GROUP GP_MONTH_ARRAY
      ITEM GP_FWMONTHS TYPE IS CHARACTER 1 OCCURS 12 TIMES
    ENDGROUP GP_MONTH_ARRAY
    ITEM GP_SUM_FW_BRKDWN TYPE IS CHARACTER 2
    ITEM GP_MAX_PART_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_MOVE_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_RMT_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_RO_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_EARLIEST_START_DT_ALL TYPE IS CHARACTER 10
    ITEM GP_LATEST_REQUIRED_DATE_ALL TYPE IS CHARACTER 10
    ITEM GP_MISSING_ROUTING_COUNT TYPE IS PACKED DECIMAL 4
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    ITEM GP_MISSING_ROUTING_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_MISSING_MOVE_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_MISSING_QUEUE_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_SCHEDULE_PROB_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_PART_LEAD_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_MOVE_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_Q_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_PRI_METHOD_1 TYPE IS UNSIGNED NUMERIC 1
    ITEM GP_PRI_METHOD_2 TYPE IS UNSIGNED NUMERIC 1

RECORD NAME IS PART_HISTORY
*   Within areas    : PROCPLN1
*   Owner of sets   : HAS_PHS
*   Member of sets : HAS_PART_HISTORY
    ITEM PH_PART_NUM TYPE IS CHARACTER 24
    ITEM PH_NUM_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM PH_MAX_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM PH_NUM_OF_HIST_OCCUR TYPE IS PACKED DECIMAL 5
    ITEM PH_AVG_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
    ITEM PH_AVG_PLAN_QTY_VAR TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS PART_HISTORY_SAMPLE
*   Within areas    : PROCPLN1
*   Member of sets : HAS_PHS
    ITEM PHS_PART_NUM TYPE IS CHARACTER 24
    ITEM PHS_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_PLAN_QTY_VAR TYPE IS PACKED DECIMAL 10 -2
    ITEM PHS_ACT_OPER_START_DATE TYPE IS CHARACTER 10
    ITEM PHS_ACT_OPER_COMP_DATE TYPE IS CHARACTER 10
    ITEM PHS_REQUIRED_DATE TYPE IS CHARACTER 10
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RECORO NAME IS RDUTING_OPERATION_HISTORY_SAMPL
*   Within areas    : PRDCPLN2
*   Member of sets : HAS_RMTH_OETAIL
*                    HAS_ROHS
     ITEM ROHS_ROUTING_NUM TYPE IS PACKED DECIMAL 2
     ITEM ROHS_OPER_NUM TYPE IS CHARACTER 4
     ITEM ROHS_OELIV_VAR TYPE IS PACKEO DECIMAL 10 -2
     ITEM ROHS_IOLE_TIME_OCC TYPE IS PACKEO DECIMAL 10 -2
     ITEM ROHS_ACT_CLOCK_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
     ITEM RDHS_PLAN_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM RDHS_EFFECT_LDAD_HRS TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_PLAN_SCRAP TYPE IS PACKEO OECIMAL 10 -2
     ITEM ROHS_ACT_SCRAP_OPER TYPE IS PACKEO OECIMAL 10 -2
     ITEM ROHS_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_PLAN_SETUP_TIME TYPE IS PACKEO DECIMAL 10 -2
     ITEM RDHS_PLAN_SETUP_LOSS TYPE IS PACKED OECIMAL 10 -2
     ITEM ROHS_MACH_UTIL TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ORO_OTY TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_ACT_OPER_OTY TYPE IS PACKED DECIMAL 10 -2
     ITEM ROHS_REOUIRED_DATE TYPE IS CHARACTER 10
     ITEM ROHS_OPER_COMP_OATE TYPE IS CHARACTER 10
     ITEM ROHS_OPER_START_DATE TYPE IS CHARACTER 10

RECORD NAME IS RESOURCE_MACH_TYPE_HISTORY
*   Within areas    : CONFIG
*   Dwner of sets   : HAS_RMTH_DETAIL
*   Member of sets : HAS_RMTH
     ITEM RMTH_RES_ID TYPE IS CHARACTER 8
     ITEM RMTH_MACHINE_TYPE TYPE IS CHARACTER 8
     ITEM RMTH_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
     ITEM RMTH_MAX_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
     ITEM RMTH_NUM_DF_HIST_OCCUR TYPE IS PACKED DECIMAL 5
     ITEM RMTH_AVG_ORO_OTY TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_PLAN_SCRAP TYPE IS PACKED OECIMAL 10 -2
     ITEM RMTH_AVG_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_PLAN_SETUP_TIME TYPE IS PACKEO DECIMAL 10 -2
     ITEM RMTH_AVG_PLAN_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_PLAN_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_MACH_UTIL TYPE IS PACKED DECIMAL 10 -2
     ITEM RMTH_AVG_IDLE_TIME_OCC TYPE IS PACKED DECIMAL 10 -2
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RECORD NAME IS ROUTING_OPERATION_HISTORY
*    Within areas    : PROCPLN2
*    Owner of sets   : HAS_ROHS
*    Member of sets  : HAS_ROH
     ITEM ROH_ROUTING_NUM TYPE IS PACKED DECIMAL 2
     ITEM ROH_OPER_NUM TYPE IS CHARACTER 4
     ITEM ROH_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
     ITEM ROH_MAX_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
     ITEM ROH_NUM_OF_HIST_OCCUR TYPE IS PACKED DECIMAL 5
     ITEM ROH_AVG_ORD_QTY TYPE IS PACKED DECIMAL 10 -2
     ITEM ROH_AVG_ACT_OPER_QTY TYPE IS PACKED DECIMAL 10 -2
     ITEM ROH_AVG_DELIV_VAR TYPE IS PACKED DECIMAL 10 -2
     ITEM ROH_AVG_PLAN_SCRAP TYPE IS PACKED DECIMAL 10 -2
     ITEM ROH_AVG_ACT_SCRAP_OPER TYPE IS PACKED DECIMAL 10 -2
     ITEM ROH_AVG_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2
     ITEM ROH_AVG_RUN_TIME_REP TYPE IS PACKED DECIMAL 10 -2
     ITEM ROH_AVG_PLAN_SETUP_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROH_AVG_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 10 -2
     ITEM ROH_AVG_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROH_AVG_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROH_AVG_ACT_CLOCK_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROH_AVG_ACT_Q_TIME TYPE IS PACKED DECIMAL 10 -2
     ITEM ROH_AVG_PLAN_QUEUE_TIME TYPE IS PACKED DECIMAL 10 -2
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RECORD NAME IS PR_CHANGE_REQUEST
*   Within areas    : FACLOAD
*   Member of sets : HAS_UNPRDCESSED_REQUESTS
    ITEM PRCR_CHANGE_ID TYPE IS PACKED DECIMAL 3
    ITEM PRCR_EARL_START_DATE TYPE IS CHARACTER 1D
    ITEM PRCR_REQUIRED_DATE TYPE IS CHARACTER 1D
    ITEM PRCR_ORD_QTY TYPE IS PACKED DECIMAL 8 -2
    ITEM PRCR_CANCEL_FLAG TYPE IS CHARACTER 1

RECDRD NAME IS LOAD_UNIT_ACTUAL_PERFORMANCE
*   Within areas    : FACLOAD
*   Member of sets : HAS_LOAP
    ITEM LUAP_ORD_NUM TYPE IS CHARACTER 12
    ITEM LUAP_DATE_PERF_REP TYPE IS CHARACTER 10
    ITEM LUAP_SHIFT_PERF_REP TYPE IS CHARACTER 8
    ITEM LUAP_ACT_DPER_START_DATE TYPE IS CHARACTER 10
    ITEM LUAP_ACT_DPER_CDMP_DATE TYPE IS CHARACTER 1D
    ITEM LUAP_ACT_RUN_TIME_REP TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ACT_SETUP_TIME_REP TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_MACH_DOWN_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ACT_Q_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ACT_MDVE_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ACT_DPER_QTY TYPE IS PACKED DECIMAL 8
    ITEM LUAP_IDLE_TIME_OCC TYPE IS PACKED DECIMAL 8
    ITEM LUAP_RES_UTIL_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_MISS_ACT_VALUE_FLAG TYPE IS CHARACTER 1
    ITEM LUAP_LIM_VIOL_FLAG TYPE IS CHARACTER 1
    ITEM LUAP_ACT_SETUP_LOSS TYPE IS PACKED DECIMAL 8
    ITEM LUAP_ACT_CLDCK_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_MACH_UTIL TYPE IS PACKED DECIMAL 2
    ITEM LUAP_START_DATE_ACT_SU TYPE IS CHARACTER 10
    ITEM LUAP_COMPL_DATE_ACT_SU TYPE IS CHARACTER 10
    ITEM LUAP_ACT_SCRAP_DPER TYPE IS PACKED DECIMAL 8
    ITEM LUAP_DELIV_VAR TYPE IS PACKED DECIMAL 1D -2
    ITEM LUAP_START_RES_ID TYPE IS CHARACTER 8
    ITEM LUAP_START_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM LUAP_END_RES_ID TYPE IS CHARACTER 8
    ITEM LUAP_END_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM LUAP_ADJ_SETUP_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_RUN_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_RES_UTIL_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_MDVE_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_Q_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_DPER_QTY TYPE IS PACKED DECIMAL 6 -2
    ITEM LUAP_ADJ_IDLE_DCC TYPE IS PACKED DECIMAL 6 -2
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RECORD NAME IS RMT_PLANNING_PERIDD
*   Within areas     : LTFLDAD
*   Dwner of sets    : IS_CDMPDSED_DF_LTLU_SEG
*   Member of sets   : ALL_RMT_PLANNING_PERIDD
*                      HAS_LT_RMT_PROFILE
    GRDUP RMTPP_CALC_KEY
      ITEM RMTPP_RES_ID_TYPE IS CHARACTER 8
      ITEM RMTPP_MACH_TYPE_TYPE IS CHARACTER 8
      ITEM RMTPP_PLN_PERIOD_ID_TYPE IS CHARACTER 10
    ENDGROUP RMTPP_CALC_KEY
    ITEM RMTPP_PLN_PERIOD_ND_TYPE IS PACKED DECIMAL 4
    ITEM RMTPP_TDTAL_LDAD_HRS_TYPE IS PACKED DECIMAL 8 -2
    ITEM RMTPP_TDTAL_CAPACITY_HRS_TYPE IS PACKED DECIMAL 8 -2
    ITEM RMTPP_CUM_LDAD_HRS_TYPE IS PACKED DECIMAL 10 -2
    ITEM RMTPP_CUM_CAPACITY_HRS_TYPE IS PACKED DECIMAL 10 -2
    ITEM RMTPP_AVERAGE_CAPACITY_TYPE IS PACKED DECIMAL 10 -2
    ITEM RMTPP_NUM_MDAYS_TYPE IS PACKED DECIMAL 6
    ITEM RMTPP_BEGIN_DATE_TYPE IS CHARACTER 10
    ITEM RMTPP_END_DATE_TYPE IS CHARACTER 10

RECDRD NAME IS LT_LOAD_UNIT
*   Within areas     : LTFLOAD
*   Owner of sets    : IS_BRDKEN_INTD_LTLU_SEGMENT
*   Member of sets   : HAS_ELIGIBLE_LTLU
    ITEM LTLU_DRD_NUM_TYPE IS CHARACTER 12
    ITEM LTLU_BEGIN_DPER_NUM_TYPE IS CHARACTER 4
    ITEM LTLU_EFFECT_LOAD_HRS_TYPE IS PACKED DECIMAL 6 -2
    ITEM LTLU_TDT_NUM_SEG_TYPE IS PACKED DECIMAL 2
    GRDUP LTLU_CURRENT_LTRMT
      ITEM LTLU_RES_ID_TYPE IS CHARACTER 8
      ITEM LTLU_MACH_TYPE_TYPE IS CHARACTER 8
    ENDGRDUP LTLU_CURRENT_LTRMT

RECORD NAME IS LT_LOAD_UNIT_SEGMENT
*   Within areas     : LTFLOAD
*   Member of sets   : IS_CDMPOSED_DF_LTLU_SEG
*                      IS_BRDKEN_INTO_LTLU_SEGMENT
    ITEM LTLUS_DRD_NUM_TYPE IS CHARACTER 12
    ITEM LTLUS_BEGIN_OPER_NUM_TYPE IS CHARACTER 4
    ITEM LTLUS_SEG_NUM_TYPE IS PACKED DECIMAL 4
    ITEM LTLUS_EFFECT_LDAD_HRS_TYPE IS PACKED DECIMAL 6 -2
    GROUP LTLUS_LTRMT_ID
      ITEM LTLUS_RES_ID_TYPE IS CHARACTER 8
      ITEM LTLUS_MACH_TYPE_TYPE IS CHARACTER 8
    ENDGROUP LTLUS_LTRMT_ID
    ITEM LTLUS_SLACK_TIME_TYPE IS PACKED DECIMAL 6 -2
    ITEM LTLUS_CDMP_D_TIME_TYPE IS PACKED DECIMAL 6 -2
    ITEM LTLUS_CDMP_MOVE_TIME_TYPE IS PACKED DECIMAL 6 -2
    ITEM LTLUS_PLN_PERIDD_NO_TYPE IS PACKED DECIMAL 4
    ITEM LTLUS_PRIDRITY_CDDE_1_TYPE IS CHARACTER 8
    ITEM LTLUS_PRIDRITY_CDDE_2_TYPE IS CHARACTER 8
    ITEM LTLUS_MOD_FLAG_TYPE IS CHARACTER 1
    ITEM LTLUS_START_DATE_TYPE IS CHARACTER 10
    ITEM LTLUS_END_DATE_TYPE IS CHARACTER 10
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RECORO NAME IS LT_RES_MACH_TYP_LOAO_PROFILE
*   Within areas    : LTFLOAD
*   Member of sets : IS_PROFILEO_BY_LTRMTLP
    ITEM LTRMTLP_RES_IO TYPE IS CHARACTER 8
    ITEM LTRMTLP_MACH_TYPE TYPE IS CHARACTER 8
    ITEM LTRMTLP_NUM_PLN_PERIOOS TYPE IS PACKED DECIMAL 4
    ITEM LTRMTLP_PLN_PERIOO_IO TYPE IS CHARACTER 10 OCCURS 26 TIMES
    ITEM LTRMTLP_NUM_MACHINES TYPE IS PACKEO OECIMAL 4
    ITEM LTRMTLP_TOTAL_LOAO TYPE IS PACKEO OECIMAL 10 -2 OCCURS 26 TIMES
    ITEM LTRMTLP_PLN_PERIOO_NO TYPE IS PACKED OECIMAL 4 OCCURS 26 TIMES
    ITEM LTRMTLP_CUM_CAPACITY TYPE IS PACKEO DECIMAL 10 -2 OCCURS 26 TIMES
    ITEM LTRMTLP_TOTAL_CAPACITY TYPE IS PACKEO OECIMAL 10 -2 OCCURS 26 TIMES
    ITEM LTRMTLP_CUM_LOAD TYPE IS PACKEO OECIMAL 10 -2 OCCURS 26 TIMES
    ITEM LTRMTLP_AVERAGE_CAPACITY TYPE IS PACKEO OECIMAL 10 -2 OCCURS 26 TIMES
    ITEM LTRMTLP_NUM_MOAYS TYPE IS PACKED OECIMAL 6 OCCURS 26 TIMES
    ITEM LTRMTLP_BEGIN_OATE TYPE IS CHARACTER 10 OCCURS 26 TIMES
    ITEM LTRMTLP_ENO_OATE TYPE IS CHARACTER 10 OCCURS 26 TIMES

RECORD NAME IS LT_RESOURCE_MACHINE_TYPE
*   Within areas    : LTFLOAD
*   Owner of sets   : HAS_LT_RMT_PROFILE
*                     IS_PROFILEO_BY_LTRMTLP
*   Member of sets : ALL_LT_RESOURCE_MACHINE_TYPE
    GROUP LTRMT_CALC_KEY
      ITEM LTRMT_RES_ID TYPE IS CHARACTER 8
      ITEM LTRMT_MACH_TYPE TYPE IS CHARACTER 8
    ENDGROUP LTRMT_CALC_KEY
    ITEM LTRMT_BAL_SEL TYPE IS CHARACTER 1
    ITEM LTRMT_OVERLOAOEO_PO_FLAG TYPE IS CHARACTER 1

RECORD NAME IS LT_PROOUCTION_REOUIREMENT
*   Within areas    : LTFLOAO
*   Owner of sets   : HAS_ELIGIBLE_LTLU
*                     HAS_TEMP_LTLU
*   Member of sets : ALL_LT_PROOUCTION_REOUIREMENT
    ITEM LTPR_ORO_NUM TYPE IS CHARACTER 12
    ITEM LTPR_ORO_OTY TYPE IS PACKEO OECIMAL 10 -2

RECORO NAME IS CAPACITY_INTERVAL
*   Within areas    : CONFIG
*   Member of sets : HAS_CI
*                     ALSO_HAS_CI
    ITEM CI_RES_IO TYPE IS CHARACTER 8
    ITEM CI_MACHINE_TYPE TYPE IS CHARACTER 8
    ITEM CI_MACH_SER_NUM TYPE IS CHARACTER 8
    ITEM CI_BEGIN_INTERVAL_IO TYPE IS CHARACTER 10
    ITEM CI_ENO_INTERVAL_IO TYPE IS CHARACTER 10
    ITEM CI_CAPACITY_HRS TYPE IS PACKED OECIMAL 10 -2
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RECORD NAME IS MOVE_HISTORY
*   Within areas    : FACLDAD
*   Owner of sets   : HAS_MHS
*   Member of sets  : HAS_MOVE_HISTORY
    ITEM MH_START_RES_ID TYPE IS CHARACTER 8
    ITEM MH_START_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM MH_END_RES_ID TYPE IS CHARACTER 8
    ITEM MH_END_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM MH_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM MH_MAX_NUM_OF_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM MH_NUM_OF_HIST_OCCUR TYPE IS PACKED DECIMAL 5
    ITEM MH_AVG_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM MH_AVG_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    -
RECORD NAME IS MOVE_HISTORY_SAMPLE
*   Within areas    : FACLOAD
*   Member of sets  : HAS_MHS
    ITEM MHS_START_RES_ID TYPE IS CHARACTER 8
    ITEM MHS_START_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM MHS_END_RES_ID TYPE IS CHARACTER 8
    ITEM MHS_END_MACH_TYPE_ID TYPE IS CHARACTER 8
    ITEM MHS_PLAN_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2
    ITEM MHS_ACT_MOVE_TIME TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS LU_STATE
*   Within areas    : FACLOAD
*   Owner of sets   : APPEARS_AS
*   Member of sets  : ALL_LU_STATE
    ITEM LUST_STATE_ID TYPE IS CHARACTER 4
    ITEM LUST_STATE_DESC TYPE IS CHARACTER 24

RECORD NAME IS LU_STATE_RELATION
*   Within areas    : FACLOAD
*   Member of sets  : IS_CHARACTERIZED_BY
*                     APPEARS_AS
    ITEM LSR_FIELD TYPE IS CHARACTER 4

RECORD NAME IS PR_STATE
*   Within areas    : CONFIG
*   Owner of sets   : INCLUDES_PR
*   Member of sets  : ALL_PR_STATE
    ITEM PRS_PRSTATE_ID TYPE IS CHARACTER 4
    ITEM PRS_PRSTATE_DESC TYPE IS CHARACTER 24

RECORD NAME IS PR_STATE_RELATION
*   Within areas    : CONFIG
*   Member of sets  : CAN_BE_DESCRIBED_BY
*                     INCLUDES_PR
    ITEM PRSR_PRFIELD TYPE IS CHARACTER 4

RECORD NAME IS TEMP_LTLU
*   Within areas    : LTTEMP
*   Member of sets  : HAS_TEMP_LTLU
    ITEM TLTLU_TEMP_AREA TYPE IS CHARACTER 122 OCCURS 20 TIMES
```

```
SET NAME IS ALL_LEVEL
*   Owner is SYSTEM
*   Member is LEVEL
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_RESOURCE
*   Owner is SYSTEM
*   Member is RESOURCE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_MACHINE_TYPE
*   Owner is SYSTEM
*   Member is MACHINE_TYPE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_PART
*   Owner is SYSTEM
*   Member is PART
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_PRODUCTION_REQUIREMENT
*   Owner is SYSTEM
*   Member is PRODUCTION_REQUIREMENT
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_RESOURCE_MACHINE_TYPE
*   Owner is SYSTEM
*   Member is RESOURCE_MACHINE_TYPE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_MACH_INSTANCE_PLAN_PERIOD
*   Owner is SYSTEM
*   Member is MACH_INSTANCE_PLANNING_PERIOD
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_PLANNING_PERIOD
*   Owner is SYSTEM
*   Member is PLANNING_PERIOD
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_TRANSACTION
*   Owner is SYSTEM
*   Member is TRANSACTION
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_GLOBAL_PARAMETER
*   Owner is SYSTEM
*   Member is GLOBAL_PARAMETER
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_MOVE_TIME
*   Owner is SYSTEM
*   Member is MOVE_TIME
*       Insertion is AUTOMATIC retention is FIXED
```

```
SET NAME IS ALL_LU_STATE
*    Owner is SYSTEM
*    Member is LU_STATE
*         Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_PR_STATE
*    Owner is SYSTEM
*    Member is PR_STATE
*         Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_LT_RESOURCE_MACHINE_TYPE
*    Owner is SYSTEM
*    Member is LT_RESOURCE_MACHINE_TYPE
*         Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_RMT_PLANNING_PERIOD
*    Owner is SYSTEM
*    Member is RMT_PLANNING_PERIOD
*         Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_LT_PRODUCTION_REQUIREMENT
*    Owner is SYSTEM
*    Member is LT_PRODUCTION_REQUIREMENT
*         Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_RESOURCE_PLANNING_PERIOD
*    Owner is SYSTEM
*    Member is RESOURCE_PLANNING_PERIOD
*         Insertion is AUTOMATIC retention is FIXED

SET NAME IS CONTAINS_R
*    Owner is LEVEL
*    Member is RESOURCE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS SEL_FOR_RELEASE
*    Owner is LEVEL
*    Member is RESOURCE
*         Insertion is MANUAL retention is OPTIONAL
*        Order is LAST

SET NAME IS MAY_EXIST_AS
*    Owner is RESOURCE
*    Member is MACHINE_INSTANCE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS HAS
*    Owner is RESOURCE
*    Member is RESOURCE_MACHINE_TYPE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST
```

```
SET NAME IS IS_RESPONSIBLE_FOR
*    Owner is RESOURCE
*    Member is PRODUCTIDN_REQUIREMENT
*         Insertion is MANUAL retention is OPTIONAL
*        Drder is LAST

SET NAME IS RELEASE_BY_DATE
*    Owner is RESOURCE
*    Member is PRDDUCTIDN_REQUIREMENT
*         Insertion is MANUAL retention is OPTIONAL
*        Order is SORTED BY
*             ASCENDING  PR_EARL_START_DATE
*             Duplicates are NOT ALLOWED

SET NAME IS IS_ASSIGNED
*    Owner is RESOURCE
*    Member is PRODUCTION_REQUIREMENT
*         Insertion is MANUAL retention is OPTIONAL
*        Order is SORTED BY
*             ASCENDING  PR_REQUIRED_DATE
*             Duplicates are LAST

SET NAME IS HAS_SHORT_TERM_LOAD
*    Owner is RESOURCE
*    Member is PRODUCTION_REQUIREMENT
*         Insertion is MANUAL retention is OPTIONAL
*        Order is LAST

SET NAME IS HAS_PSUEDD_RELEASE
*    Owner is RESOURCE
*    Member is PRODUCTION_REQUIREMENT
*         Insertion is MANUAL retention is OPTIONAL
*        Order is LAST

SET NAME IS CONTAINS_RELEASE
*    Owner is RESOURCE
*    Member is PRODUCTIDN_REQUIREMENT
*         Insertion is MANUAL retention is OPTIONAL
*        Order is SORTED BY
*             ASCENDING  PR_REQUIRED_DATE
*             Duplicates are LAST

SET NAME IS CONTAINS_LLR
*    Owner is RESOURCE
*    Member is LOWER_LEVEL_RESOURCE
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS IS_ALSO
*    Owner is RESOURCE
*    Member is LOWER_LEVEL_RESOURCE
*         Insertion is MANUAL retention is FIXED
*        Order is LAST
```

```
SET NAME IS HAS_LT_RES_PROFILE
*   Owner is RESOURCE
*   Member is RESOURCE_PLANNING_PERIOD
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_REPRESENTED_BY
*   Owner is MACHINE_TYPE
*   Member is MACHINE_INSTANCE
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_USED_AS
*   Owner is MACHINE_TYPE
*   Member is RESOURCE_MACHINE_TYPE
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS CONSISTS_OF_MI
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is MACHINE_INSTANCE
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_PROBS_LOADING
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is LOAD_UNIT
*        Insertion is MANUAL retention is OPTIONAL
*       Order is SORTED BY
*            ASCENDING  LU_PRIORITY_CODE_1
*            DESCENDING LU_PRIORITY_CODE_2
*            Duplicates are LAST

SET NAME IS HAS_CI
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is CAPACITY_INTERVAL
*        Insertion is MANUAL retention is OPTIONAL
*       Order is SORTED BY
*            ASCENDING  CI_BEGIN_INTERVAL_ID
*            Duplicates are LAST

SET NAME IS HAS_RMTH
*   Owner is RESOURCE_MACHINE_TYPE
*   Member is RESOURCE_MACH_TYPE_HISTORY
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_RMTH_DETAIL
*   Owner is RESOURCE_MACH_TYPE_HISTORY
*   Member is ROUTING_OPERATION_HISTORY_SAMPL
*        Insertion is MANUAL retention is OPTIONAL
*       Order is LAST
```

```
SET NAME IS IS_PROFILED_BY
*   Owner is MACHINE_INSTANCE
*   Member is MACH_INSTANCE_PLANNING_PERIOD
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is NEXT

SET NAME IS ALSO_HAS_CI
*   Owner is MACHINE_INSTANCE
*   Member is CAPACITY_INTERVAL
*       Insertion is MANUAL retention is OPTIONAL
*       Order is SORTED BY
*           ASCENDING  CI_BEGIN_INTERVAL_ID
*           Duplicates are LAST

SET NAME IS HAS_ROUTING
*   Owner is PART
*   Member is PLANNED_ROUTING
*       Insertion is AUTOMATIC retention is FIXED
*       Order is SORTED BY
*           ASCENDING  PL_ROUTING_NUM
*           Duplicates are NOT ALLOWED

SET NAME IS HAS_BEEN_ORDERED_IN
*   Owner is PART
*   Member is PRODUCTION_REQUIREMENT
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_PART_HISTORY
*   Owner is PART
*   Member is PART_HISTORY
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_PHS
*   Owner is PART_HISTORY
*   Member is PART_HISTORY_SAMPLE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_COMPOSED_OF
*   Owner is PLANNED_ROUTING
*   Member is ROUTING_OPERATION
*       Insertion is AUTOMATIC retention is FIXED
*       Order is SORTED BY
*           ASCENDING  RO_OPER_NUM
*           Duplicates are NOT ALLOWED

SET NAME IS MAY_BE_REPLACED_BY
*   Owner is ROUTING_OPERATION
*   Member is ALTERNATE_OPERATION
*       Insertion is AUTOMATIC retention is FIXED
*       Order is SORTED BY
*           ASCENDING  AO_ALT_OPER_NUM
*           Duplicates are NOT ALLOWED
```

```
SET NAME IS HAS_LU
*   Owner is ROUTING_OPERATION
*   Member is LOAO_UNIT
*        Insertion is MANUAL retention is OPTIONAL
*        Order is LAST

SET NAME IS HAS_ROH
*   Owner is ROUTING_OPERATION
*   Member is ROUTING_OPERATION_HISTORY
*        Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS HAS_ROHS
*   Owner is ROUTING_OPERATION_HISTORY
*   Member is ROUTING_OPERATION_HISTORY_SAMPL
*        Insertion is MANUAL retention is OPTIONAL
*        Order is LAST

SET NAME IS MAY_ALSO_REQUIRE
*   Owner is ALTERNATE_OPERATION
*   Member is CONTINGENCY_OPERATION
*        Insertion is AUTOMATIC retention is FIXEO
*        Order is SORTEO BY
*            ASCENOING  CO_CONT_OPER_NUM
*            Ouplicates are NOT ALLOWEO

SET NAME IS CONSISTS_OF_LU
*   Owner is PRODUCTION_REOUIREMENT
*   Member is LOAO_UNIT
*        Insertion is AUTOMATIC retention is OPTIONAL
*        Order is NEXT

SET NAME IS CONSOLIOATEO_LU
*   Owner is PRODUCTION_REQUIREMENT
*   Member is LOAO_UNIT
*        Insertion is MANUAL retention is OPTIONAL
*        Order is NEXT

SET NAME IS HAS_UNPROCESSEO_REOUESTS
*   Owner is PROOUCTION_REOUIREMENT
*   Member is PR_CHANGE_REOUEST
*        Insertion is AUTOMATIC retention is FIXED
*        Order is LAST

SET NAME IS CAN_BE_OESCRIBEO_BY
*   Owner is PROOUCTION_REOUIREMENT
*   Member is PR_STATE_RELATION
*        Insertion is AUTOMATIC retention is FIXEO
*        Order is LAST
```

```
SET NAME IS IS_LOADED_WITH
*   Owner is MACH_INSTANCE_PLANNING_PERIOD
*   Member is LOAD_UNIT
*        Insertion is MANUAL retention is OPTIONAL
*        Order is NEXT
*   Member is LOAD_UNIT_SEGMENT
*        Insertion is MANUAL retention is OPTIONAL
*        Order is NEXT

SET NAME IS IS_BROKEN_INTO
*   Owner is LOAD_UNIT
*   Member is LOAD_UNIT_SEGMENT
*        Insertion is AUTOMATIC retention is FIXED
*        Order is NEXT

SET NAME IS HAS_LOAP
*   Owner is LOAD_UNIT
*   Member is LOAD_UNIT_ACTUAL_PERFORMANCE
*        Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS IS_CHARACTERIZED_BY
*   Owner is LOAD_UNIT
*   Member is LU_STATE_RELATION
*        Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS MAY_BE_SPECIFIED_BY
*   Owner is PLANNING_PERIOD
*   Member is M_OAY
*        Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS INCLUDES_PR
*   Owner is PR_STATE
*   Member is PR_STATE_RELATION
*        Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS HAS_MOVE_HISTORY
*   Owner is MOVE_TIME
*   Member is MOVE_HISTORY
*        Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS HAS_MHS
*   Owner is MOVE_HISTORY
*   Member is MOVE_HISTORY_SAMPLE
*        Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST

SET NAME IS APPEARS_AS
*   Owner is LU_STATE
*   Member is LU_STATE_RELATION
*        Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST
```

```
SET NAME IS HAS_ELIGIBLE_LTLU
*   Owner is LT_PRODUCTIDN_REQUIREMENT
*   Member is LT_LOAD_UNIT
*        Insertion is MANUAL retention is OPTIONAL
*       Order is NEXT

SET NAME IS HAS_TEMP_LTLU
*   Dwner is LT_PRDDUCTIDN_REQUIREMENT
*   Member is TEMP_LTLU
*        Insertion is MANUAL retention is FIXED
*       Order is LAST

SET NAME IS HAS_LT_RMT_PROFILE
*   Owner is LT_RESOURCE_MACHINE_TYPE
*   Member is RMT_PLANNING_PERIOD
*        Insertion is AUTDMATIC retention is FIXED
*       Order is NEXT

SET NAME IS IS_PROFILED_BY_LTRMTLP
*   Owner is LT_RESOURCE_MACHINE_TYPE
*   Member is LT_RES_MACH_TYP_LOAD_PROFILE
*        Insertion is AUTDMATIC retention is FIXED
*       Drder is NEXT

SET NAME IS IS_CDMPDSED_OF_LTLU_SEG
*   Owner is RMT_PLANNING_PERIOD
*   Member is LT_LOAD_UNIT_SEGMENT
*        Insertion is MANUAL retention is OPTIONAL
*       Drder is SDRTED BY
*            ASCENDING  LTLUS_PRIORITY_CDDE_1
*                       LTLUS_PRIDRITY_CODE_2
*            Duplicates are ALLOWED

SET NAME IS IS_BROKEN_INTD_LTLU_SEGMENT
*   Owner is LT_LOAD_UNIT
*   Member is LT_LOAD_UNIT_SEGMENT
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is NEXT

SET NAME IS IS_MADE_UP_DF
*   Owner is TRANSACTIDN
*   Member is ACTIVITY
*        Insertion is AUTOMATIC retention is DPTIONAL
*       Order is NEXT

SET NAME IS IS_A
*   Owner is TRANSACTIDN
*   Member is PRIOR_TRANSACTION
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_EXECUTED_AFTER
*   Owner is TRANSACTIDN
*   Member is PRIDR_TRANSACTION
*        Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST
```

```
SET NAME IS MAY_BE_PERFORMED_AS
*    Owner is ACTIVITY
*    Member is SUBPROCESS_ACTIVITY
*         Insertion is AUTOMATIC retention is OPTIONAL
*        Order is LAST
```

APPENDIX J

PP&CS DATA-BASE SUBSCHEMA TOTSUBBL LISTING

```
*****************************************************************************
*                                                                           *
*   THE FOLLOWING IS A LISTING OF THE SUBSCHEMA TOTSUB_BL                   *
*                                                                           *
*****************************************************************************
SUBSCHEMA NAME IS TOTSUB_BL FOR TOTPPCS SCHEMA
*    Subschema version number : 12-DEC-1983 09:29:23.60
*    Schema version number :  9-DEC-1983 19:23:07.72 (1)

REALM CONFIG
     IS CONFIG
REALM LTFLOAD
     IS LTFLOAO

RECORO NAME IS LEVEL
*    Within areas    : CONFIG
*    Owner of sets   : CONTAINS_R
*                      SEL_FOR_RELEASE
*    Member of sets : ALL_LEVEL
     ITEM L_LEV_NUM TYPE IS CHARACTER 2
     ITEM L_LEV_IO TYPE IS CHARACTER 8
     ITEM L_LEV_OPT_CD TYPE IS CHARACTER 8

RECORO NAME IS RESOURCE
*    Within areas    : CONFIG
*    Owner of sets   : HAS_LT_RES_PROFILE
*    Member of sets : ALL_RESOURCE
*                      CONTAINS_R
*                      SEL_FOR_RELEASE
     ITEM R_RES_IO TYPE IS CHARACTER 8
     ITEM R_LEV_ID TYPE IS CHARACTER 8
     ITEM R_LEV_DPT_CD TYPE IS CHARACTER 8
     ITEM R_REL_LOAD_LOWER_LIM TYPE IS PACKEO OECIMAL 8
     ITEM R_REL_LOAD TYPE IS PACKEO OECIMAL 10 -2
     ITEM R_REL_LOAD_UP_LIM TYPE IS PACKEO OECIMAL 8
     ITEM R_INWORK_DATE_REL_INT TYPE IS PACKED DECIMAL 8
     ITEM R_AUTO_REL_IND TYPE IS CHARACTER 1
     ITEM R_TOT_ACCUM_WORK TYPE IS PACKED OECIMAL 10 -2
     ITEM R_RES_LOAD_UNIT_HOURS TYPE IS PACKED DECIMAL 10 -2
     ITEM R_DISP_LOAD TYPE IS PACKED DECIMAL 10 -2
     ITEM R_CURRENT_LOAD TYPE IS PACKED OECIMAL 10 -2
     ITEM R_WORK_TO_BE_RELEASEO TYPE IS PACKED DECIMAL 8
     ITEM R_ACT_REL_QTY TYPE IS PACKED DECIMAL 10 -2
     ITEM R_RES_OESC TYPE IS CHARACTER 16
     ITEM R_PROD_RATE_TRACKING_SIG TYPE IS CHARACTER 1
     ITEM R_RES_EFFEC TYPE IS PACKEO DECIMAL 2
     ITEM R_RES_EFFIC TYPE IS PACKED DECIMAL 2
     ITEM R_RES_CAP_UTIL TYPE IS PACKEO OECIMAL 2
     ITEM R_RES_SETUP_EFFIC TYPE IS PACKEO OECIMAL 2
     ITEM R_RES_TOT_SETUP_LOSS_RATE TYPE IS PACKEO OECIMAL 2
     ITEM R_LEV_NUM TYPE IS CHARACTER 2
     ITEM R_OVERLOAOED_PO_FLAG TYPE IS CHARACTER 1
```

```
RECORD NAME IS RESOURCE_PLANNING_PERIOD
*   Within areas     : CONFIG
*   Member of sets   : ALL_RESOURCE_PLANNING_PERIOD
*                      HAS_LT_RES_PROFILE
    GROUP RPP_CALC_KEY
      ITEM RPP_RESOURCE_ID TYPE IS CHARACTER 8
      ITEM RPP_PLN_PERIOD_ID TYPE IS CHARACTER 10
    ENDGROUP RPP_CALC_KEY
    ITEM RPP_TOTAL_CAPACITY_HRS TYPE IS PACKED DECIMAL 8 -2
    ITEM RPP_TOTAL_LOAD_HRS TYPE IS PACKED DECIMAL 8 -2
    ITEM RPP_CUM_CAPACITY_HRS TYPE IS PACKED DECIMAL 10 -2
    ITEM RPP_CUM_LOAD_HRS TYPE IS PACKED DECIMAL 10 -2

RECORD NAME IS TRANSACTION
*   Within areas     : CONFIG
*   Owner of sets    : IS_MADE_UP_OF
*                      IS_A
*                      IS_EXECUTED_AFTER
*   Member of sets   : ALL_TRANSACTION
    ITEM T_TRAN_ID TYPE IS CHARACTER 6
    ITEM T_BUSY_FLAG TYPE IS CHARACTER 1
    ITEM T_TRAN_DESC TYPE IS CHARACTER 40
    ITEM T_USER_ID TYPE IS CHARACTER 12
    ITEM T_START_DATE TYPE IS CHARACTER 10
    ITEM T_START_TIME TYPE IS CHARACTER 8
    ITEM T_END_DATE TYPE IS CHARACTER 10
    ITEM T_END_TIME TYPE IS CHARACTER 8
    ITEM T_INFO_BLOCK TYPE IS CHARACTER 250

RECORD NAME IS PRIOR_TRANSACTION
*   Within areas     : CONFIG
*   Member of sets   : IS_A
*                      IS_EXECUTED_AFTER
    ITEM PT_TRAN_ID TYPE IS CHARACTER 6
    ITEM PT_MISC_INFO TYPE IS CHARACTER 30

RECORD NAME IS ACTIVITY
*   Within areas     : CONFIG
*   Owner of sets    : MAY_BE_PERFORMED_AS
*   Member of sets   : IS_MADE_UP_OF
    ITEM A_ACTIVITY_ID TYPE IS CHARACTER 6
    ITEM A_STATUS TYPE IS CHARACTER 1
    ITEM A_DESC TYPE IS CHARACTER 40
    ITEM A_MISC_INFO TYPE IS CHARACTER 40
    ITEM A_NUM_SUBPROC TYPE IS PACKED DECIMAL 3

RECORD NAME IS SUBPROCESS_ACTIVITY
*   Within areas     : CONFIG
*   Member of sets   : MAY_BE_PERFORMED_AS
    ITEM SA_SUBPROCESS_ID TYPE IS UNSIGNED NUMERIC 3
    ITEM SA_ACTIVITY_ID TYPE IS CHARACTER 6
    ITEM SA_STATUS TYPE IS CHARACTER 1
    ITEM SA_DESC TYPE IS CHARACTER 40
    ITEM SA_MISC_INFO TYPE IS CHARACTER 60
```

```
RECORD NAME IS PLANNING_PERIOD
*   Within areas      CONFIG
*   Owner of sets     MAY_BE_SPECIFIED_BY
*   Member of sets    ALL_PLANNING_PERIOD
    ITEM PP_PERIOD_ID TYPE IS CHARACTER 10
    ITEM PP_GREG_DATE TYPE IS CHARACTER 10
    ITEM PP_FISCAL_YR TYPE IS CHARACTER 10
    ITEM PP_FISCAL_QTR TYPE IS CHARACTER 10
    ITEM PP_FISCAL_MO TYPE IS CHARACTER 10
    ITEM PP_FISCAL_WK TYPE IS CHARACTER 10
    ITEM PP_MDAY_NUM TYPE IS CHARACTER 6
    ITEM PP_GREG_ST_DT TYPE IS CHARACTER 10
    ITEM PP_GREG_END_DT TYPE IS CHARACTER 10
    ITEM PP_SHUT_DOWN_FLAG TYPE IS CHARACTER 1

RECORD NAME IS M_DAY
*   Within areas      CONFIG
*   Member of sets    MAY_BE_SPECIFIED_BY
    ITEM MD_MDAY_NUM TYPE IS CHARACTER 6
    ITEM MD_GREG_DATE TYPE IS CHARACTER 10
    ITEM MD_FISCAL_YR TYPE IS CHARACTER 10
    ITEM MD_FISCAL_QTR TYPE IS CHARACTER 10
    ITEM MD_FISCAL_MO TYPE IS CHARACTER 10
    ITEM MD_FISCAL_WK TYPE IS CHARACTER 10

RECORD NAME IS GLOBAL_PARAMETER
*   Within areas      CONFIG
*   Member of sets    ALL_GLOBAL_PARAMETER
    ITEM GP_ID TYPE IS CHARACTER 4
    ITEM GP_M_DAY_UPLIM TYPE IS CHARACTER 4
    ITEM GP_FW_BEGIN_DAY TYPE IS CHARACTER 1
    ITEM GP_PREV_FY_END TYPE IS CHARACTER 2
    GROUP GP_MONTH_ARRAY
      ITEM GP_FWMONTHS TYPE IS CHARACTER 1 OCCURS 12 TIMES
    ENDGROUP GP_MONTH_ARRAY
    ITEM GP_SUM_FW_BRKDWN TYPE IS CHARACTER 2
    ITEM GP_MAX_PART_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_MOVE_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_RMT_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_MAX_RC_SAMPLES TYPE IS PACKED DECIMAL 5
    ITEM GP_EARLIEST_START_DT_ALL TYPE IS CHARACTER 10
    ITEM GP_LATEST_REQUIRED_DATE_ALL TYPE IS CHARACTER 10
    ITEM GP_MISSING_ROUTING_COUNT TYPE IS PACKED DECIMAL 4
    ITEM GP_MISSING_ROUTING_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_MISSING_MOVE_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_MISSING_QUEUE_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_SCHEDULE_PROB_LIMIT TYPE IS PACKED DECIMAL 4
    ITEM GP_PART_LEAD_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_MOVE_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_Q_TIME_DEFAULT TYPE IS PACKED DECIMAL 6 -2
    ITEM GP_PRI_METHOD_1 TYPE IS UNSIGNED NUMERIC 1
    ITEM GP_PRI_METHOD_2 TYPE IS UNSIGNED NUMERIC 1
```

```
RECORD NAME IS RMT_PLANNING_PERIDD
*   Within areas     : LTFLOAD
*   Dwner of sets    : IS_COMPDSED_DF_LTLU_SEG
*   Member of sets   : ALL_RMT_PLANNING_PERIOD
*                      HAS_LT_RMT_PROFILE
    GROUP RMTPP_CALC_KEY
      ITEM RMTPP_RES_ID TYPE IS CHARACTER 8
      ITEM RMTPP_MACH_TYPE TYPE IS CHARACTER 8
      ITEM RMTPP_PLN_PERIOD_ID TYPE IS CHARACTER 10
    ENDGROUP RMTPP_CALC_KEY
    ITEM RMTPP_PLN_PERIOD_NO TYPE IS PACKED DECIMAL 4
    ITEM RMTPP_TOTAL_LOAD_HRS TYPE IS PACKED DECIMAL 8 -2
    ITEM RMTPP_TDTAL_CAPACITY_HRS TYPE IS PACKED DECIMAL 8 -2
    ITEM RMTPP_CUM_LDAD_HRS TYPE IS PACKED DECIMAL 1D -2
    ITEM RMTPP_CUM_CAPACITY_HRS TYPE IS PACKED DECIMAL 1D -2
    ITEM RMTPP_AVERAGE_CAPACITY TYPE IS PACKED DECIMAL 1D -2
    ITEM RMTPP_NUM_MDAYS TYPE IS PACKED DECIMAL 6
    ITEM RMTPP_BEGIN_DATE TYPE IS CHARACTER 10
    ITEM RMTPP_END_DATE TYPE IS CHARACTER 10

RECDRD NAME IS LT_LOAD_UNIT
*   Within areas     : LTFLOAD
*   Dwner of sets    : IS_BROKEN_INTO_LTLU_SEGMENT
*   Member of sets   : HAS_ELIGIBLE_LTLU
    ITEM LTLU_ORD_NUM TYPE IS CHARACTER 12
    ITEM LTLU_BEGIN_OPER_NUM TYPE IS CHARACTER 4
    ITEM LTLU_EFFECT_LOAD_HRS TYPE IS PACKED DECIMAL 6 -2
    ITEM LTLU_TDT_NUM_SEG TYPE IS PACKED DECIMAL 2
    GROUP LTLU_CURRENT_LTRMT
      ITEM LTLU_RES_ID TYPE IS CHARACTER 8
      ITEM LTLU_MACH_TYPE TYPE IS CHARACTER 8
    ENDGROUP LTLU_CURRENT_LTRMT

RECDRD NAME IS LT_LOAD_UNIT_SEGMENT
*   Within areas     : LTFLDAD
*   Member of sets   : IS_CDMPOSED_DF_LTLU_SEG
*                      IS_BROKEN_INTD_LTLU_SEGMENT
    ITEM LTLUS_DRO_NUM TYPE IS CHARACTER 12
    ITEM LTLUS_BEGIN_OPER_NUM TYPE IS CHARACTER 4
    ITEM LTLUS_SEG_NUM TYPE IS PACKED DECIMAL 4
    ITEM LTLUS_EFFECT_LDAD_HRS TYPE IS PACKED DECIMAL 6 -2
    GRDUP LTLUS_LTRMT_ID
      ITEM LTLUS_RES_IO TYPE IS CHARACTER 8
      ITEM LTLUS_MACH_TYPE TYPE IS CHARACTER 8
    ENDGROUP LTLUS_LTRMT_ID
    ITEM LTLUS_SLACK_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LTLUS_COMP_O_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LTLUS_COMP_MOVE_TIME TYPE IS PACKED DECIMAL 6 -2
    ITEM LTLUS_PLN_PERIOD_NO TYPE IS PACKED DECIMAL 4
    ITEM LTLUS_PRIORITY_CODE_1 TYPE IS CHARACTER 8
    ITEM LTLUS_PRIORITY_CODE_2 TYPE IS CHARACTER 8
    ITEM LTLUS_MOD_FLAG TYPE IS CHARACTER 1
    ITEM LTLUS_START_DATE TYPE IS CHARACTER 10
    ITEM LTLUS_END_DATE TYPE IS CHARACTER 10
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RECORD NAME IS LT_RES_MACH_TYP_LOAD_PROFILE
*   Within areas    : LTFLOAD
*   Member of sets : IS_PROFILED_BY_LTRMTLP
    ITEM LTRMTLP_RES_ID TYPE IS CHARACTER 8
    ITEM LTRMTLP_MACH_TYPE TYPE IS CHARACTER 8
    ITEM LTRMTLP_NUM_PLN_PERIODS TYPE IS PACKED DECIMAL 4
    ITEM LTRMTLP_PLN_PERIOD_ID TYPE IS CHARACTER 10 OCCURS 26 TIMES
    ITEM LTRMTLP_NUM_MACHINES TYPE IS PACKED DECIMAL 4
    ITEM LTRMTLP_TOTAL_LOAD TYPE IS PACKED DECIMAL 10 -2 OCCURS 26 TIMES
    ITEM LTRMTLP_PLN_PERIOD_NO TYPE IS PACKED DECIMAL 4 OCCURS 26 TIMES
    ITEM LTRMTLP_CUM_CAPACITY TYPE IS PACKED DECIMAL 10 -2 OCCURS 26 TIMES
    ITEM LTRMTLP_TOTAL_CAPACITY TYPE IS PACKED DECIMAL 10 -2 OCCURS 26 TIMES
    ITEM LTRMTLP_CUM_LOAD TYPE IS PACKED DECIMAL 10 -2 OCCURS 26 TIMES
    ITEM LTRMTLP_AVERAGE_CAPACITY TYPE IS PACKED DECIMAL 10 -2 OCCURS 26 TIMES
    ITEM LTRMTLP_NUM_MDAYS TYPE IS PACKED DECIMAL 6 OCCURS 26 TIMES
    ITEM LTRMTLP_BEGIN_DATE TYPE IS CHARACTER 10 OCCURS 26 TIMES
    ITEM LTRMTLP_END_DATE TYPE IS CHARACTER 10 OCCURS 26 TIMES

RECORD NAME IS LT_RESOURCE_MACHINE_TYPE
*   Within areas    : LTFLOAD
*   Owner of sets   : HAS_LT_RMT_PROFILE
*                     IS_PROFILED_BY_LTRMTLP
*   Member of sets : ALL_LT_RESOURCE_MACHINE_TYPE
    GROUP LTRMT_CALC_KEY
      ITEM LTRMT_RES_ID TYPE IS CHARACTER 8
      ITEM LTRMT_MACH_TYPE TYPE IS CHARACTER 8
    ENDGROUP LTRMT_CALC_KEY
    ITEM LTRMT_BAL_SEL TYPE IS CHARACTER 1
    ITEM LTRMT_OVERLOADED_PD_FLAG TYPE IS CHARACTER 1

RECORD NAME IS LT_PRODUCTION_REQUIREMENT
*   Within areas    : LTFLOAD
*   Owner of sets   : HAS_ELIGIBLE_LTLU
*   Member of sets : ALL_LT_PRODUCTION_REQUIREMENT
    ITEM LTPR_ORD_NUM TYPE IS CHARACTER 12
    ITEM LTPR_ORD_QTY TYPE IS PACKED DECIMAL 10 -2

SET NAME IS ALL_LEVEL
*   Owner is SYSTEM
*   Member is LEVEL
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_RESOURCE
*   Owner is SYSTEM
*   Member is RESOURCE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_PLANNING_PERIOD
*   Owner is SYSTEM
*   Member is PLANNING_PERIOD
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_TRANSACTION
*   Owner is SYSTEM
*   Member is TRANSACTION
*       Insertion is AUTOMATIC retention is FIXED
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SET NAME IS ALL_GLOBAL_PARAMETER
*   Owner is SYSTEM
*   Member is GLOBAL_PARAMETER
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_LT_RESOURCE_MACHINE_TYPE
*   Owner is SYSTEM
*   Member is LT_RESOURCE_MACHINE_TYPE
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_RMT_PLANNING_PERIOD
*   Owner is SYSTEM
*   Member is RMT_PLANNING_PERIOD
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_LT_PRODUCTION_REQUIREMENT
*   Owner is SYSTEM
*   Member is LT_PRODUCTION_REQUIREMENT
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS ALL_RESOURCE_PLANNING_PERIOD
*   Owner is SYSTEM
*   Member is RESOURCE_PLANNING_PERIOD
*       Insertion is AUTOMATIC retention is FIXED

SET NAME IS CONTAINS_R
*   Owner is LEVEL
*   Member is RESOURCE
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS SEL_FOR_RELEASE
*   Owner is LEVEL
*   Member is RESOURCE
*       Insertion is MANUAL retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_LT_RES_PROFILE
*   Owner is RESOURCE
*   Member is RESOURCE_PLANNING_PERIOD
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS MAY_BE_SPECIFIED_BY
*   Owner is PLANNING_PERIOD
*   Member is M_DAY
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS HAS_ELIGIBLE_LTLU
*   Owner is LT_PRODUCTION_REQUIREMENT
*   Member is LT_LOAD_UNIT
*       Insertion is MANUAL retention is OPTIONAL
*       Order is NEXT
```

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SET NAME IS HAS_LT_RMT_PROFILE
*   Owner is LT_RESOURCE_MACHINE_TYPE
*   Member is RMT_PLANNING_PERIOD
*       Insertion is AUTOMATIC retention is FIXED
*       Order is NEXT

SET NAME IS IS_PROFILED_BY_LTRMTLP
*   Owner is LT_RESOURCE_MACHINE_TYPE
*   Member is LT_RES_MACH_TYP_LOAD_PROFILE
*       Insertion is AUTOMATIC retention is FIXED
*       Order is NEXT

SET NAME IS IS_COMPOSED_OF_LTLU_SEG
*   Owner is RMT_PLANNING_PERIOD
*   Member is LT_LOAD_UNIT_SEGMENT
*       Insertion is MANUAL retention is OPTIONAL
*       Order is SORTED BY
*           ASCENDING  LTLUS_PRIORITY_CODE_1
*                      LTLUS_PRIORITY_CODE_2
*           Duplicates are ALLOWED

SET NAME IS IS_BROKEN_INTO_LTLU_SEGMENT
*   Owner is LT_LOAD_UNIT
*   Member is LT_LOAD_UNIT_SEGMENT
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is NEXT

SET NAME IS IS_MADE_UP_OF
*   Owner is TRANSACTION
*   Member is ACTIVITY
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is NEXT

SET NAME IS IS_A
*   Owner is TRANSACTION
*   Member is PRIOR_TRANSACTION
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS IS_EXECUTED_AFTER
*   Owner is TRANSACTION
*   Member is PRIOR_TRANSACTION
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST

SET NAME IS MAY_BE_PERFORMED_AS
*   Owner is ACTIVITY
*   Member is SUBPROCESS_ACTIVITY
*       Insertion is AUTOMATIC retention is OPTIONAL
*       Order is LAST
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